



Universiteit Utrecht

A place of their own

Children's experiences of urban green spaces in de Baarsjes, Amsterdam



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Some final words must be addressed to you, the reader of this thesis. Thank you for taking the time to read my work, as I have spent many hours trying to complete and refine it. I am happy that somebody gets to read it, and I am also happy that that person is no longer (just) me.

Thank you,

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In the early 2000's, a Chicago based research team discovered that teenage girls with a natural view from their bedroom windows scored better on impulsivity control and concentration tests when compared to peers with a less natural view from their windows. Building on these findings, the same team started to look into the effects of natural contact on children with behavioural problems such as ADD or ADHD. In line with their first results, the team discovered that a 20 minute walk in a natural area can be just as effective in reducing the symptoms of these behavioural problems as the effects of the widely used ADHD medication (Chawla, 2015; Gearin & Kahle, 2006; Louv, 2005).

The scholars of this research team were not the only ones to find a positive connection between children's natural contact and health benefits. A Scottish study found that parents whose children lived in proximity to natural environments rated their average health higher as compared to parents whose children did not live in proximity to natural areas. Being in contact with nature has been found to have physical benefits for children, such as less stress, a lower blood pressure and longer and deeper sleep (Chawla, 2015). Natural contact has furthermore been found to have a positive effect on children's concentration and works as a buffer, limiting traumatizing events and soothing children so that they are able to bounce back from upsetting experiences. Natural contact has therefore been linked to lower depression rates in children and more vital mental and emotional health rates (Chawla, 2015; Louv, 2005; R. C. Moore & Cooper Marcus, 2008). Outdoor play in natural environments has also been connected to a positive effect on children's physical health (Skår, Wold, et al., 2016). Proximity to green areas has been linked to a lower body mass index and healthier weight in children (Chawla, 2015). Natural contact helps children develop physically, because children need to be aware of how they use their bodies and are stimulated by the natural environment to push their boundaries, growing more confident of themselves in the process as well. When climbing a tree, you need to be mindful of your steps. Where you place your feet and which branch to reach for needs to be carefully calculated if you do not want to hurt yourself. And every time you make it to new heights, you become aware of your accomplishment and grow in your confidence and physical abilities (Coates & Pimlott-Wilson, 2019).

The benefits connected to children's contact with the natural environment do not stop there. Natural contact has also been found to work as a stimulating factor in children's development of creativity and the nurturing of their imagination (Chawla, 2015). When playing in nature, children are provided with the freedom to imagine anything they can think of. A slide is a slide, swings are for swinging, but the branches of a tree can be anything a child wants it to be. This imaginative freedom of nature gives children opportunities to express their imagination and inner world and engages them with their surroundings in ways that common playgrounds do not (Louv, 2005). Children use these natural sensory experiences to develop a rich interior life (R. Moore, 1997). The freedom of the natural environment does not only include such internal benefits, it also extends to the development of external benefits, such as children's social skills. Most of children's life is structured for them; they do not get to decide with whom they go to school or with whom they play on their sports team with. Different sport clubs and schools can segregate a neighbourhood, but out on the streets, children can play with whomever they want. Age, gender, nationality, all of this can be put aside when meeting each other outside. The freedom to go out on their own thus gives children the freedom to form communities of their own and presents them with the agency to hang out with whoever they like (Karsten, 2005).

Natural contact can thus be regarded as a positive factor, influencing children's physical and mental health and the development of their social skills, imagination and sense of self. Yet, for many children growing up today, such natural contact is not as easy to come by as it had been a few generations ago (Jantje Beton,

2018; Karsten, 2005; van den Berg & Beute, 2019). More than half of the children worldwide are currently growing up in urban environments, and this number is only expected to grow over the coming years (R. C. Moore & Cooper Marcus, 2008). Children growing up in the urban environment rely on urban green spaces for their daily natural contact (Haaland & van den Bosch, 2015). Urban green space(s) can be understood as any form of greenery found in urban areas and is therefore a form of nature. Examples of urban green spaces are, amongst other things, parks, trees by the side of the street, and gardens (Colding et al., 2020; Haaland & van den Bosch, 2015).

The ever growing urban environment leaves less and less room for such urban green spaces every day, for as cities are expanding rapidly, both the quality and quantity of urban green space pay the price for the expansion and densification of urban areas (Haaland & van den Bosch, 2015; Maas et al., 2006). As cities struggle to manage their budgets, many municipalities decide to sell their urban green spaces, as they are costly in maintenance and bring in little money on their own. Such privatization leads to a loss of public green spaces in the urban environment. This trend simultaneously leads to a decrease in urban green spaces, and a densification of the remaining urban green spaces, as city dwellers have to share a decreasing amount of green space with an increasing number of people (Colding et al., 2020).

This is a worrisome prospect, as US scholars have found a rise in childhood obesity and a decline in mental abilities such as concentration amongst children who were deprived from natural contact in their daily lives (Louv, 2005). This is in line with the work of Louise Chawla (2015) as well, who found that the mental health of children who live over 20 minutes or further away from natural areas is generally worse when compared to children who live in closer proximity to nature, regardless of family income. Such findings further highlight the positive influence of natural contact on children, as well as the negative effects of natural deprivation. But while findings like these stress the importance of *why* children should get in contact with the natural environment, they leave little room for children to express *how* they want to get in contact with nature, for knowledge on what children themselves value about their nearby natural areas is still lacking (Skår, Wold, et al., 2016). A research gap can thus be discovered, for far too often, children's voices are left out of the scientific debate on children's engagement with nature (Adams & Savahl, 2017). The aim of this research is to make a contribution to closing this gap, by putting the voices and experiences of the children participating in this study front and centre.

This research is conducted in de Baarsjes, a neighbourhood in the western part of Amsterdam which has recently been found to be one of the least green urban areas in the Netherlands (Natuur&Milieu, 2022). The neighbourhood, celebrating its 100th birthday last year, is described by the city of Amsterdam as a densely populated neighbourhood with wide streets, but little green spaces (City of Amsterdam, 2022). De Baarsjes houses a little bit over 38.000 inhabitants according to the most recent numbers of Statistics Netherlands. Almost 5000 of these inhabitants are aged 15 or younger, making up 13% of the total inhabitants of de Baarsjes. Out of the 20780 households living in the area, 4216 are classified as households with children. Put into numbers, 20% of the households in de Baarsjes are households with children (CBS, 2020). How these children experience the urban green spaces de Baarsjes has to offer them is put at the heart of this research, guided by the following research question and sub-questions:

“To what extent do the urban green spaces in de Baarsjes cater to the needs of children between the age of 7 and 12?”

1. *How do children perceive the natural environment such as urban green spaces?*
2. *How do children use urban green spaces?*
3. *How are children constraint in their usage of urban green spaces?*
4. *How do children prefer to use urban green spaces?*

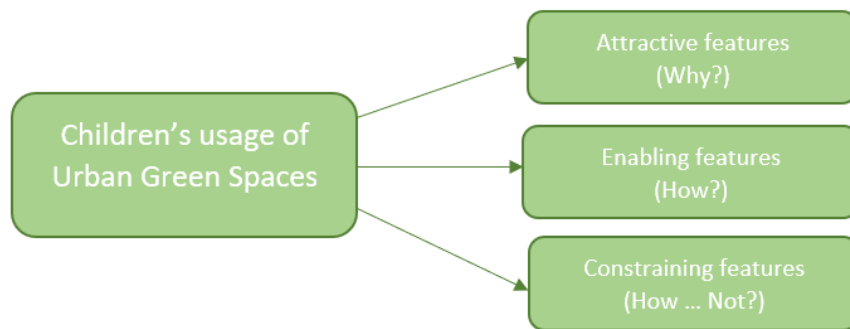
Answers to this research question can be of both scientific and societal relevance. As stated previously, the scientific debate on children's engagement with the natural environment rarely includes the voices and experiences of children themselves (Adams & Savahl, 2017; Skår, Wold, et al., 2016). Far too often, children are simply understood as an object within their surroundings, instead of an actor, when researching their needs (Skår, Gundersen, et al., 2016). Many authors are starting to argue, however, that this is unjustified and depriving research on children's usage of and engagement with nature of valuable information. More and more scholars believe that children should be perceived as active members of society, shaping the world around them like the rest of us and providing a unique perspective and generational knowledge nobody else can give (Gearin & Kahle, 2006; Skår, Gundersen, et al., 2016; Skår, Wold, et al., 2016). The scientific relevance of this research is thus a contribution to the slowly but surely growing collection of knowledge on children's visions on and experiences with the natural environment. The results of this study can furthermore be of societal relevance when they are used by city planners trying to design urban areas in which the needs and values of children will be met. City planners have a responsibility to the current and future generations of children growing up in urban environments to ensure that their surroundings cater to their needs. Children are one of the most vulnerable groups living in cities, yet their voices often remain unheard in urban development (R. C. Moore & Cooper Marcus, 2008). A worrisome prospect for children growing up in urban areas, for a clash has been found between what adults find desirable urban green spaces versus what children find desirable urban green spaces. Thus, as long as children's voices are not included in urban planning, urban green spaces will most likely not cater to their needs (Chawla, 2015). In order for children's voices to be included in urban planning, more knowledge on children's preferred usage of urban green spaces needs to be collected, which is both the aim and societal relevance of this study.

This thesis is structured in the following way. First, a theoretical framework is proposed, offering an overview of current literature in the field of Children's Geography and urban green space usage. This framework will form the literary basis from which this research will develop. Second, a methodological section will shine a light on the walk-a-long and drawing methods used in this research, as well as a justification on why these methods have been deemed the most suitable in answering the research questions and an elaboration of the methods used to find participants and to eventually structure the collected data. Third, a neighbourhood profile will provide background information on the history, social context, and current demographics of de Baarsjes, the neighbourhood which serves as the backdrop to this research. Fourth, the results section will focus on the outcome of this research, categorized by relevant themes which came to light during the investigation such as children's perception, usage, limitations, and preferred usage of the natural environment. This section furthermore explains how these themes should be understood and why they are valuable. Fifth, the discussion section will elaborate on the most important findings and how these findings connect to the literature as proposed in the theoretical framework. Sixth and final, the conclusion section provides an answer to the research question while summarizing the most important findings and points of interest from this study, such as children's embodied connection to the natural environment, the importance of safety when it comes to creating accessible urban green spaces, and children's need for a place to claim as their own. This section furthermore consists of a reflective paragraph, focussing on the limitations of this study, and of a recommendations paragraph, proposing a way forward for future researchers and city planners.

Theoretical framework

In order to create a clear overview of existing literature regarding children's usage of the natural environment such as urban green spaces, this section is divided into three subsections. First, the attractive features of urban green spaces will be elaborated upon, shining a light on *why* children have been found to be attracted to the natural environment such as urban green spaces in the first place. The second subsection

will look into the enabling features of urban green spaces, diving into *how* children have been found to make use of urban green spaces. The third and final subsection of this theoretical framework will turn to the constraints children have been found to encounter in their usage of urban green spaces, explaining *how* children do *not* make use of urban green spaces, due to several limitations they face in their daily lives. This lay-out can also be found in the theoretical model pictured below:



An important notion to keep in mind while going forward is that urban green spaces are a part of the natural environment, for urban green spaces are all the natural aspects that can be found in an urban environment (Colding et al., 2020; Haaland & van den Bosch, 2015). Thus, whenever the term urban green space is encountered in this theoretical framework, it can be interchanged for “the natural environment”, for urban green spaces are by definition a part of the natural environment.

Why children are attracted to the natural environment

As previously discussed in the opening section, researchers have found many positive effects of the natural environment on children’s development. Ranging from lower stress levels and more vital mental and emotional health rates (Chawla, 2015; Louv, 2005; R. C. Moore & Cooper Marcus, 2008), to stimulating creative skills (Chawla, 2015; Louv, 2005; R. Moore, 1997) and providing children with an opportunity to form their own social circle, regardless of age, gender and/or social class (Karsten, 2005; R. C. Moore & Cooper Marcus, 2008). Though this explains why natural contact should be considered an important influential factor in children’s development, it does not explain why children themselves are drawn to the natural environment. This subsection will elaborate on the attractive features of the natural environment such as urban green spaces, looking first into the Biophilia Theory as presented by Edward Wilson, and second to the difference between children’s places and places for children as proposed by Kim Rasmussen.

The biophilia theory

Natural contact is of importance for children’s development in physical, mental, emotional and social areas, to name a few (Skår, Gundersen, et al., 2016). Nature offers something to children no artificial environment has been able to replace. It offers endless opportunities, engages all senses, is ever changing and yet, a place to come home to. It can simultaneously be stimulating and calming, challenging and nurturing (Louv, 2005; R. Moore, 1997). This effect has been referred to as the soft fascination of nature: grasping attention without force, allowing an overactive mind to wander and calm down (van den Berg & Beute, 2019). The natural world furthermore provides children with a sense of harmony and unity they can connect with, and which they can nourish within themselves as well. Children can therefore be understood as biophilic beings; they learn about themselves and the world around them through their interaction with the natural environment (Chawla, 2015).

The biophilia theory, first introduced by Edward Wilson in 1984, is based on the principle that human beings have an intrinsic connection with other living beings (Kellert & Wilson, 1995). We all come from, and cannot exist without, our connection to the natural world (R. Moore, 1997). Biophilia is, in essence, the biological connection humans have to the natural world, the need to get in contact with other forms of life (Adams & Savahl, 2017; Louv, 2005). Human identity and fulfilment is constructed through this connection; we know who we are, and who we are not, through contact with nature (Kellert & Wilson, 1995; Skår & Krogh, 2009). A growing body of literature suggests that this connection needs to be nurtured daily, in order for humans to lead healthy and productive lives (Downton et al., 2017). Contact with nature should in this sense not be seen as a luxury, but as a universal, basic need (Heerwagen, 2009).

Wilson regards biophilia as something human beings are born with, something that is within the core of our essence and needs nurturing in order to properly develop. This believe, however, has to this day failed to be proven correct; no scientist has thus far found a biophilic gene in the human body, although it has to be said that not many scientists have been looking for this gene either (van den Berg & Beute, 2019). Other supporters of the biophilia theory therefore suggest that this sense is not something we are born with, but something we develop throughout our lives. We learn to love something as we get to know it. Becoming familiar with the natural environment would, in that sense, spark a love for and connection to nature that can last a lifetime, installing the biophilic connection in the process. From this point of view, biophilia is a choice humanity actively has to make, instead of something we are born with (Orr, 1993).

On the other hand, however, the positive effect the natural environment has on (mental) health is found over and over again and would point more towards an intrinsic connection instead of something that is formed over time (Grinde & Patil, 2009; Hand et al., 2017). Patients have been found to heal faster and better when they had a natural view from their hospital beds, for example (Louv, 2005). Such visual stimuli have been found to reduce stress levels as well, leading to an improved mental health and resilience (Grinde & Patil, 2009). Results like these have put several authors on Wilson's side, claiming that the natural world is inherently part of every human being, and that it cannot be lost to us. We cannot grow distant from nature in the same way we cannot grow distant from ourselves, from breathing, from the pulling force of gravity keeping us grounded (Rautio, 2013).

Many scholars believe that a biophilic notion is even more significant for children than it is for adults (Kalvaitis & Monhardt, 2015; Louv, 2005). One explanation for this difference lies in the way children perceive and connect to the natural environment. As children are making sense of themselves and the world around them, they collect sensory experiences to form opinions and a sense of self. Adults, on the other hand, already have many experiences which they can rely on and use when making decisions. Put simply, children experience something, which shapes the way they think about that thing, whereas for adults, the way they think about something shapes the way they experience it. This explains why children are drawn to the natural environment: the wide range of sensory experiences offer them a great opportunity to learn about themselves and the world around them (Kalvaitis & Monhardt, 2015). This connection between children and the natural environment has been found in recent studies as well. One study, for example, would let children choose between two dolls, one that loves the sound of birds and playing outside, and another which was described to dislike the sound of birds and preferred to play indoors. The majority of the children participating in this study would choose the first doll and proclaimed that they had more in common with the first doll than with the second. Where these children were from and how much natural contact they engaged with in their daily lives did not influence this outcome (van den Berg & Beute, 2019).

Whether biophilia is installed or nurtured in humans throughout their lives is still up for debate. However, many researchers agree that Wilson is on to something, an opinion which is backed up by over ten years of research showing a positive connection between people and natural sites such as rivers, grasslands and

wide open views. As the biophilia theory can be regarded as a work in progress, this paragraph will be concluded by underlining the words of international expert in urban children and nature Louise Chawla, who pleads for a common sense approach towards the theory. The biophilia theory should, according to Chawla, be recognised as meaningful and influential, while at the same time still needing more work done to back it up and define it. It deserves time and attention, as do the the beneficial influences natural spaces have on children's health, creative play, concentration and other mental, physical and social developments (Louv, 2005).

Children's places and places for children

Nature speaks to children because it is not initiated by other humans. It can be chaotic, irrational, heterogeneous, and everything a child may want or need it to be, leaving room for children to engage in an interacting relationship with their environment (Skår, Gundersen, et al., 2016). Children remake natural spaces to make them "their own", becoming attached to these place through the discovery and exploration of them. Nature, to children, is an open canvas. One which they can use to create a world of their own, to portray their inner world and which they can colour however they like (Skår, Gundersen, et al., 2016). This is why nature has been found to be more inspiring and attractive to children than artificial attributes (Coates & Pimlott-Wilson, 2019). Children and teenagers often do not care as much for designed playgrounds as city planners might think. Instead, they prefer areas which can be manipulated to fit their needs and which can be used in multiple, unstructured ways. The natural environment lends itself perfectly for such usage, as it leaves room for creativity and manipulation (Gearin & Kahle, 2006).

Nature can, in this sense, be understood as a children's place. Kim Rasmussen makes a case for the proper appreciation of children's places, not to be confused with places for children, in her 2004 article. Children, she proposes, spend most of their time in school, recreational areas and at home. These places can be understood as places for children, as they are designed by adults to suit the needs of the children making use of them. However, children long for places to claim for themselves, places often forgotten or unnoticed by adults, places which they can manipulate until they recognize themselves in it. These children's places deserve more attention, Rasmussen argues, as they can hold special meaning and identity for the children who have claimed such space as their own (Rasmussen, 2004). Nature can be understood as a (potential) children's place, as it is a place children can claim as their own and to which they can attach a sense of well-being and value (Adams & Savahl, 2017; Louv, 2005). It is a place in which children can find freedom and fantasy, but also the privacy to be somewhere detached from the adult world, a place which they can claim as their own (Louv, 2005). Children's places can be shared by many, or just be meaningful to an individual. The relationship children may have with these places can last for years, or be lost after a few days. The context in which they are created differ, there is no one way to describe them and not a single set of attributes by which they can be recognized (Rasmussen, 2004).

Rasmussen (2004) gives multiple real life examples of children's places, such as 'Bumbleby', nothing more but a plot of land with some trees, sticks and grasslands to the eyes of an unsuspecting adult, but an entire town in the mind of the boys who "created" it. Another example she gives goes to show that children's places and places for children are not separate areas per se. The courtyard of an Copenhagen neighbourhood, which served as a backdrop in her research, can be understood as both a children's place and a place for children. On the one hand, Rasmussen's seven year old participant showed her the sandbox and a slide, both designed and placed there by adults and therefore a place for children. On the other hand, the child Rasmussen interviewed told her about her favourite tree in the courtyard, which she and her friends liked to climb even though one of her neighbours would not allow them to. This tree, claimed as the favourite climbing tree by the participant and her friends, can thus be understood as a children's place. It was not placed there with the intention to be used by children, but claimed by them nevertheless.

Another way in which children's places can hold meaning for children, is through the opportunity to create a microsphere; a world created by children in play in which they mimic real life scenarios and adult roles. These microspheres provide a safe basis for children to get familiar with the rules of the more complicated social world, over which they have little control. As nature can be interpreted any way the children would like, it serves as the perfect environment to create such a microsphere, a place to call their own without adults telling them what they to do and who they need to be, a safe space in which they can practice everything they might become (Chawla, 2015).

How children make use of the natural environment

While the previous subsection has elaborated upon the reasons why children are attracted to the natural environment, this subsection will turn to the ways children make use of the natural environment. The next paragraphs will shine a light on how children engage with nature and how certain activities and parts of their lives are enabled through their contact with the natural environment. First, the focus will be on the practicalities of children's usage of the natural environment, looking into how they go out and use nature. Second, a deeper dive into the enabling features of the natural environment is presented, looking into parts of children's lives made possible through contact with the natural environment, such as a sense of agency over their lives and control over their social circle.

Practical usage

Children's usage of the natural environment can be found in different varieties and intensities. It can be as straightforward as looking out of a window to observe birds fluttering about in trees, or as elaborate as getting lost in the woods playing a game with their friends. Even minimal contact with the natural environment can have a positive effect on children. Just engaging with the visual and auditory aspects of the natural environment has been found to protect children's psychological well-being and armours them against stress. The ability to look out of their bedroom window and see a tree; hear the wind ruffle its leaves and watch as the birds dance through its branches is enough to bring out these benefits. Even indoors, nature can thus be used to calm the mind and trigger focus (Louv, 2005).

As soon as children step out of their front door, the opportunities to use nature grow profoundly. No longer just something to look at or listen to, natural contact can take on a more active form. The natural environment has been found to encourage city dwellers from all ages to engage in an active lifestyle, such as walking or cycling to their destination instead of relying on motorized transport (Skår & Krogh, 2009). Just the addition of some trees to a street can be enough to motivate people to walk more, as trees have been found to have a similar motivating effect on walking as artificial stimulators such as streetlights (Vich et al., 2019). The children participating in the study of Katherine Wilson and her colleagues showed similar behaviour. They named natural elements to be one of their favourite attributes from their walk home from school, and they would often adjust their route so they had the opportunity to walk through a park or patches of a forest. These adjustments would in most cases increase the length of their walk, but that did not matter to these children. They preferred a greener route over a shorter one, using urban green spaces to brighten their routes, and engaging in a more active lifestyle at the same time (Wilson et al., 2019).

Children may also use the natural environment to engage in activities, such as free, unstructured play. Instead of just looking out on nature, or passing through it, this form of natural contact enables children to actually interact with the natural environment. Free, unstructured play has been named as the most fruitful way for children to get in contact with the natural environment (Coates & Pimlott-Wilson, 2019; Herrington & Brussoni, 2015; Skår, Gundersen, et al., 2016; Skår & Krogh, 2009). Play can be defined in multiple ways, but the overarching values are a dynamic engagement with the surroundings and social values. Building a treehouse with a friend is thus an example of play, but so is playing ballgames with your classmates or pretending to be a popstar with your siblings while performing in your living room. Play is an important

instrument for experimental learning, as children learn best through meaningful and relevant experiences (Coates & Pimlott-Wilson, 2019). Free, unstructured play, can occur anywhere and is self-motivated; not directed by an adult (Herrington & Brussoni, 2015).

Children prefer to use natural areas for unstructured play, because nature offers them opportunities to explore, manipulate and claim their surroundings however they like. In doing so, the natural environment offers children a chance to create their own play spaces. Children find freedom and refuge in the natural environment, away from the more stressful indoors area, where they have to play by certain rules laid out for them by the adults in their lives (Skår & Krogh, 2009). Because of this, children have been found to engage in more captivating, intrinsically motivated play when playing in natural environments. Artificial playgrounds may have them play actively as well, but mostly because they are constantly moving from one attribute to the other, whereas natural playgrounds have them engaged in longer, more complex play. Scholars have therefore concluded that natural elements such as trees, rocks, sand and water are fundamental when it comes to more elaborate forms of play (Herrington & Brussoni, 2015).

One important thing to keep in mind, however, is that the natural environment is in essence not the most “child proof” area you would be able to find. It can be harsh, messy, and even dangerous. But that should not mean that children should be kept from it (Louv, 2005). A valuable way to offer children natural contact in a controlled area, can be through the instalment of natural playgrounds or forest schools. Natural playgrounds have been on the rise in the Netherlands since the early 2000’s. They are defined by their terrain and the absence of traditional playing equipment. Natural playgrounds merely provide children with play invitations. They do not tell a child what to do or how to play, but present them with the opportunity to engage in play. Main characteristics of natural playgrounds are shallow bodies of water, uneven terrain, trees which are easy to climb and large amounts of vegetations, often with berries growing in them which children can pick in summer. These playgrounds are excluded from the regulations all regular Dutch playgrounds have to follow since 1997 because they are understood as a natural area first and a playground second. Nevertheless, a caretaker is often present during opening hours to keep an eye on the children and make sure no one gets seriously injured (Verstrate & Karsten, 2016). Instalments such as natural playgrounds use the natural environment to involve children in playful learning activities, such as building a hut or manipulating a stream of water. This way, children are presented with the opportunity to try out several activities through the practice of free play. In doing so, they are stimulated in their curiosity for the natural environment. (Coates & Pimlott-Wilson, 2019; R. C. Moore & Cooper Marcus, 2008).

Enabling features

Through their usage of the natural environment, some aspects of children’s lives are enabled or enlarged, such as the freedom to hang out with whoever they like or the agency to decide for themselves what they want to do and who they want to do it with. Out in nature, children may get or create opportunities for which there is no or less room in more structured areas or parts of their lives. This paragraph will focus on these enabling features of the natural environment, looking into a sense of agency and the social aspects that are given a chance to develop throughout children’s usage of the natural environment.

Most areas in which the lives of children unfold are controlled by adults, and the rules that they have implemented. Throughout the day, children have very little agency over what they can do, when they can do it, and who they can do it with. The natural environment, however, can be claimed, used and manipulated as their own, giving children a sense of control, however little it may be, over their environment (R. C. Moore & Cooper Marcus, 2008). Children need such spaces in their lives, in which they have the freedom to experiment, fail, and eventually succeed in order to develop themselves. These experiences help them grow into independent and confident adults (Adams & Savahl, 2017). The natural world lends itself perfectly for self-paced challenges, giving children the opportunity to stretch their

boundaries at their own pace. In their interaction with their surroundings, children come to know more about themselves, grow in their confidence and abilities and seek out new achievements. A tree will encourage a child to keep on reaching for the next branch, and the next, and the next, posing as a safehouse and a challenge simultaneously (Chawla, 2015).

The development of agency moreover enables children to form social communities of their own, regardless of aspects such as social class, gender and age (Karsten, 2005; R. C. Moore & Cooper Marcus, 2008). Most of children's life is structured for them. They do not get to decide with whom they go to school or with whom they play on their sports team with. Different sport clubs and school can segregate a neighbourhood. But out on the streets, children can play with whomever they want. Age, gender, nationality, all of this can be put aside when meeting each other outside. The freedom to go out on their own thus gives children the freedom to form communities of their own and presents them with the agency to hang out with whoever they like (Karsten, 2005). Pamela Wridt witnessed a similar phenomenon in her research on the experiences of various "blocks" in New York over three generations. Some areas in the neighbourhood, such as playing field, served as a no-man's-land. These areas did not belong to a single group, or a single block of houses. Instead, they served as a meeting place for different groups and children from different blocks. A place where they could engage in football games together, challenge and get to know each other. The freedom to go out in the neighbourhood and socialize with people from their block and beyond offered these children the opportunity to form their own relationships and communities. Communities which they would still remember when discussing them in Wridt's research, sometimes over 40 years later (Wridt, 2004).

How children are constraint in their natural contact

A growing number of Dutch children participating in a 2018 survey say that they do not have the opportunity to play outside as often as they would like. Three out of ten children even state that they never or seldom play outdoors. This same survey, however, found that children still name playing outside as one of their favourite things to do in their free time (Jantje Beton, 2018). Such findings go to show that, when looking at how children come in contact with natural environments such as urban green spaces, it is just as important to shine a light on how they do not get into contact with these natural environments.

(Sub)urban children have long been detached from natural environments due to several reasons. A lack of urban green spaces such as parks in their neighbourhood. A lack of time and money for parents to take them out, leading to parental constraint from urban green space usage. The addition of new technologies which make the indoor world more safe and attractive, in the eyes of the fearful and caring parent, as opposed to the outside world (Louv, 2005). The ways children's usage of urban green spaces is constrained is divided in three general categories: constraints in access, the role of parents, and constraints in time (Skår, Wold, et al., 2016). The remainder of this theoretical framework will shine a light on these types of constraints.

Access constraints

Accessibility to urban green spaces is a complex geographical concept which can be influenced by many different factors (Hoffmann et al., 2017; Rigolon et al., 2018). This subsection puts the spotlight on geographic access to urban green spaces in order to elaborate upon the ways in which children are constraint in their usage of urban green spaces. Geographic access to urban green spaces is defined by the quality and quantity of urban green spaces, as well as the distance urban dwellers have to travel in order to reach the nearest natural area in their neighbourhood (Rigolon et al., 2018). Geographic access furthermore consists of both objective and subjective factors in regard of the proximity to and availability of urban green spaces (Bhuyan, 2022). This subsection will first shine a light on the objective factors influencing geographic access to urban green spaces, before turning to the subjective factors which play a role in the accessibility of urban green spaces.

Objective factors influencing geographic access to urban green spaces include the accessibility range, or, in other words, the distance people have to travel to reach urban green spaces, the number of urban green spaces available to urban dwellers within a certain distance, and the maintenance levels of the urban green spaces at hand (Bhuyan, 2022; Rigolon et al., 2018). Objective factors such as proximity to urban green spaces are an influential factor to keep in mind when looking into the ways children's geographic access to urban green spaces is constrained. As children are not in control of most parts of their lives, their only chance of getting in contact with the natural area on their own, is if such areas can be found close to their home (Skår, Wold, et al., 2016). Children's objective geographic access to urban green spaces has seen a decline over the past years (Coates & Pimlott-Wilson, 2019), due to a decrease in both the quality and quantity of urban green spaces. Objective factors such as proximity to and quantity of urban green spaces have thus become more constraining over the past years, as the number of urban green spaces continues to drop, partly due to privatization of urban land (Colding et al., 2020; Soga et al., 2018).

Geographic accessibility of urban green space does not just rely on the proximity to available natural areas. Urban green spaces must be well maintained in order to be accessible as well. Maintenance is therefore another important objective factor influencing children's geographic access to urban green spaces (Bhuyan, 2022). Rubbish being dumped in urban green space and vandalization of public areas can lead people to feel as if these areas are not maintained properly, resulting in them feeling less safe and making less use of urban green spaces. Taking proper care of urban green space is therefore of much importance in regulating the accessibility of these areas (O'Brien, 2006).

Modern cities contain many barriers, which prevent children growing up in urban environments from getting in contact with natural areas (R. C. Moore & Cooper Marcus, 2008; Verstrate & Karsten, 2016). Besides the objective factors influencing children's geographic access to urban green spaces presented above, several subjective factors which may also affect children's geographic access to urban green spaces can be distinguished as well. Subjective factors include different preferences and perceptions of children when it comes to their usage of the nearby natural environment (Bhuyan, 2022). Esteemed safety is, for example, an important factor which influences children's geographic accessibility of natural areas. When discussing outdoor areas, both parents and children regard their assessed safety as one of their first priorities. Thomas and Thompson found in their 2004 study that English children's most prominent fears in urban green spaces were strangers, criminals, and getting lost (Thomas & Thompson, 2004). Thus, in order to be truly accessible to children, urban green spaces must also be perceived safe.

The importance of such subjective factors must not be underestimated when assessing children's geographic accessibility of urban green spaces, as is illustrated in the work of Bhuyan (2022) on children's usage of play spaces in Dhaka. This study found that, while children's proximity to such play spaces was rather high, 70% of the children participating had access to a play area within 800 meters from their home, the actual usage of those play areas was very low, around 5%. Such an example goes to show that, when estimating children's geographic access to urban green spaces, it is not sufficient to look at objective factors such as proximity to urban green spaces alone. Subjective factors must be included as well in order to create a more rounded view on geographic access to urban green spaces, for it is a complex concept which is influenced by a variety of factors simultaneously (Hoffmann et al., 2017; Rigolon et al., 2018).

Role of parents

Parents play a big role in children's access, or lack of access, to urban green space as well (Chawla, 2015). A growth in parental fears regarding unsupervised play in urban green spaces has been named as one of the reasons for the decline in children's natural contact over the past few decades. The urban environment is no longer perceived to be a place for children, according to these concerned parents. There are several reasons for this, one of them being the bogeyman syndrome, first coined by Richard Louv. This fear of

strangers abducting, kidnapping or otherwise harming children playing alone on the street is being sensationalized by the media and can cause parents to see danger lurking around every (unsupervised) corner (Louv, 2005; R. Moore, 1997; Verstrate & Karsten, 2016). These parental concerns have become more influential due to a change in family and neighbourhood relations (Skår & Krogh, 2009). More and more children are growing up in double income households, instead of single income households. Because of this, children no longer have an adult present to keep an eye on them when playing in their neighbourhood (R. Moore, 1997). Lia Karstens research on children's access to the urban environment in Amsterdam came to similar conclusions. Her respondents, former children, as she calls them, noted that friends, neighbours and even the police always kept an eye on them when they were out, playing in the street. This supervision allowed them to have freedom to explore the city as they liked, while never truly being out of sight. Many children growing up in the same areas during her research in the 2000's, however, did not enjoy a similar freedom. The lack of familiar eyes on the streets has led to an increase in indoor children, who's play areas are confined to the well-known rooms of their own house (Karsten, 2005).

An increase in traffic is furthermore keeping children indoors, both due to parental fear (R. Moore, 1997) and a decrease in appeal (Chawla, 2015). The expansion of the city has been accompanied by a rise in traffic density. Amsterdam in the early 2000's, for example, housed twice as many cars as there were children (Karsten, 2005). Such developments incidentally restrict children in their freedom and knowledge of their environments, as it has caused parents to become more fearful of their children crossing busy roads and getting in accidents with reckless drivers. Not only has this heightened fear resulted in a restriction of how far children are allowed to go from their homes, but also in a restriction of their independence (R. Moore, 1997). This growth in urban traffic has driven children from the public realm into private properties over the last decades, restricting their access of urban green spaces in the process (R. C. Moore & Cooper Marcus, 2008). Parental fears decreasing children's access to urban green spaces has resulted in the emergence of a safety paradox. Children need to engage in challenging activities and situations, so they can learn to deal with risks through embodied experiences. Funnily enough, it is parental fear of the risks of unsupervised outdoor play, that deprives their children to obtain the skills needed to manage risks later in life (Skår, Wold, et al., 2016). One could therefore speak of a safety paradox, creating an illusion of safety in the short term, but setting children up for poor risk management skills in the long term (Louv, 2005).

A shift in how children get access to the natural environment has occurred over the last decades. Previously, parents would send their children outside to play on their own. Nature was, in that sense, an informal place where children could meet. This allowed them to form communities of their own, not constrained by age, gender and social background. Nowadays, however, children are often not allowed by their parents to go outside on their own due to fears of strangers and traffic dangers (Skår, Gundersen, et al., 2016). The supervision of play has changed quite drastically as well. While twenty percent of the parents partaking in a survey conducted by Natural England in 2009 said to have been supervised while playing outdoors when they were young, eighty percent of the parents in that same study said to not let their child play outdoors without supervision (Natural England, 2009; Skår, Wold, et al., 2016). Additionally, ninety-four percent of the survey participants who were over 50 claimed that they had more freedom to roam the natural world when they were young as compared to children growing up today (Natural England, 2009).

Time constraints

But even if children would have access to urban green spaces, their usage of these areas may be constrained nevertheless. Children's schedules are often filled with planned activities, leaving them with little or no time for unstructured play in natural areas (Skår, Gundersen, et al., 2016). Time is therefore an influential limitation when looking at how children cannot get into contact with the natural environment, maybe even more so than access. A neighbourhood or landscape can be designed and redesigned over and over again, but time can only be spend once. And if children's schedules are being filled with planned activities, city

planners can redesign the urban environment as much as they like, but it will never get children into better contact with nearby natural environments (Skår, Wold, et al., 2016).

Children are kept busy with school, after-school institutions, sports classes, and other planned activities which eat away from their opportunities to spend unplanned, unsupervised time in the natural area (Skår, Wold, et al., 2016). The majority of parents that participated in the research of Margrete Skår and Erling Krogh noted that they would prefer for their children to have more time for unstructured, outdoor play, but they simply were not able to fit it in their schedule (Skår & Krogh, 2009). Lia Karsten has named the children growing up in such situations the backseat generation. Children of the backseat generation are constrained in outdoor play not in access, but in time. Their parents are in control of their schedules, and plan it in such a way that they are left with little to no time to engage in unstructured activities. Being driven from school to after school activities to home, children of the backseat generation have very little agency left over their day to day activities (Karsten, 2005). Such presence and control of adults has diminished the freedom and autonomy children previously had over their outdoors experiences (Skår, Gundersen, et al., 2016).

If children, or their parents, want them to stay on top of their game, they have no time to waste on unstructured play. But, says Richard Louv, unstructured time spend in the natural area should not be understood as wasted time. Time in nature, he argues, is essential and we as a society would be wise to treat it as such. The children he interviewed agreed that during times they were allowed unstructured play in the natural area, they felt free. Free of worries, free of responsibilities, free of pressure. Outside these moments, they found themselves busy with chores, homework, sport lessons and so on. Some children came to the realisation that they only had two or three hours per week in which they could spend however they liked. The remainder of their time was filled with planned activities. The pressure some kids experience due to these schedules that leave no room for free, unstructured time can be stressful at best and harmful at worst (Louv, 2005). This is not just the case for the American children Richard Louv interviewed for his study. A Dutch survey came to a similar conclusion, with 15 percent of the 495 children participating in this study stating that they have no time to play outside because they are too busy with schoolwork and hobby's (Jantje Beton, 2018).

Time spend indoors behind a screen, such as playing videogames or watching television, is often named as another competitor of time spend in the natural environment (Skår, Wold, et al., 2016; Verstrate & Karsten, 2016). As the television became a standard part of most household inventories, more and more children started to spend an increasing amount of time indoors (Karsten, 2005). A survey on outdoor play amongst Dutch children held in 2018 underlines this finding. This study found that children growing up in the past decade spend a lot less time playing outdoors as compared to their (grand)parents. When playing inside, children named watching television and playing videogames as their favourite activities (Jantje Beton, 2018). So, while the outdoors grew to be less attractive to play, the indoors became a more suitable place for children to spend their time. Especially after the addition of the television to most households (Karsten, 2005; Louv, 2005).

The constraints elaborated upon in this subsection have led to a decrease in children's contact with the natural environment (Adams & Savahl, 2017; Coates & Pimlott-Wilson, 2019; Skår, Wold, et al., 2016). A downwards spiral has been set into motion. The less children get access to the outdoors, the more alienated they become of the natural environment and the more they will start to fear spontaneous encounters in nature (Skår & Krogh, 2009). This movement away from natural contact is a dangerous one. Yet what is too often missing from this discussion, is how children themselves view urban green spaces and how they would prefer to use these natural areas (Gearin & Kahle, 2006; Skår, Gundersen, et al., 2016). This research on the match between children's needs for natural contact and the urban green spaces at hand in de Baarsjes will

attempt to fill a small part of this gap, using the theories expanded upon in the past three sections as the basis from which to move forward. How this is achieved will be elaborated on in the next section, which focusses on the methods used in this study.

Methods

In order to find answers to the research questions proposed in the introduction, several methods have been used. This section will look into these methods, elaborating on how they have been used and why they should be understood as suitable for this research. Children respond best to research methods in which they are genuinely stimulated and involved. It is thus of importance to create opportunities in the methods which children can direct themselves and to view the children as an active part of the research, not just a passive object. Only then can significant results be achieved (Wilson et al., 2019). In order to obtain such meaningful results, this study has made use of two interactive methods: a drawing exercise and walk-a-longs. Before the value and procedure of these methods is explained, this section will first shine light on the challenges that are connected to doing research on a vulnerable group such as children, such as the power dynamics at play and the ethical issues that may arise during such research. This section will continue by elaborating on the ways this research has found its participants, as well as the ways in which this research has aimed to limit the effects of the power imbalance between researcher and participants, and the ways in which ethical issues that possibly arose during the research have been handled. Finally, the method used for to qualitatively analyse the data that has been collected for this study will be discussed.

Power dynamics

Power dynamics are at play in any form of research, as the participant is at all times less in control of the study when compared to the researcher. Since research with children deals not only with this power dynamic, but also with the difference in authority between children and adults in general, it is of importance to keep the influence the researcher and this imbalance have on the outcome of the study in mind (Hemming, 2008; Mitchell, 2006). The adult-child power relationship is an uneven one in nature, as the lives of children are almost completely managed by adults, such as their parents and teachers (Mitchell, 2006). It has been a tendency in the past to try and remove the power imbalance between child participants and adult researchers, but this has been found impossible. Lately, it is thus generally accepted that this power struggle is an unavoidable part of research. The best way to deal with it is to be aware of the power dynamics at play, so they can be limited at best and called out to minimize their impact on the research results at worst (Hemming, 2008). These power relations may bring out specific ethical challenges as well, since children should not be forced to participate but might easily feel like they are because of the adult-child power imbalance (Mitchell, 2006).

One way to reduce the power imbalance in children's studies, is to adopt child-centred methods to collect data. Instead of viewing children as adults to be, as used to be the norm, they are more and more understood as individuals in their own right, bearing knowledge and perspective only they can make known. In order to gain access to their perspectives, researchers have been, and continuously are, challenged to rethink their methods to suit the perspective of their child participants. Child-centred methods have been created in order to suit children's ways of thinking and articulating themselves and are thus understood to get the best possible results. Visual methods, such as drawing and/or photography are widely perceived to be child-centred, as they do not put spoken communication front and centre, in which adults have the advantage over children since they are generally better articulated. Children may be better suited to express themselves through pictures or experiences, as opposed to words. An important component of child-centred methods is that children are understood as actors within the research process: research is done *with* children, not *on* them. This gives them an important notion of control over the research, which

is needed to best gain insight in their worldview and experiences (Mitchell, 2006; R. C. Moore & Cooper Marcus, 2008). Another important part of child-centred methods is that they should include activities which children enjoy doing and are somewhat familiar with. Only then will they engage in the research and will they feel confident in doing so (Mitchell, 2006; Wilson et al., 2019).

The child-centred methods adopted by this research are a drawing exercise and a walk-a-long. These methods can be understood as qualitative research methods. These methods have been chosen because this research focusses on the experiences, behaviours and preferences of the participants. Qualitative methods leave room for detailed experiences and the exploration of the participants inner world and their actions (Hennink et al., 2020) and will therefore be suitable for this study. Multiple methods have been chosen, because it has been found that a combination of imaginative and physical methods such as the drawing exercise and walk-a-long will lead to a richer understanding of children's inner worlds (Hemming, 2008). The following paragraphs will focus on each of these methods; their individual benefits, what they have hopefully added to this research, and how they have taken form.

Drawing exercise

The first part of this research is a drawing exercise, in which children have been asked to illustrate their favourite places to be in nature. As drawing is something children are used to doing, such exercises are understood to be an accessible method when doing research with children. The communicative advantage and freedom that accompany drawing exercises are furthermore understood to be a positive aspect of this method. Because of these characteristics, drawing exercises are widely regarded as a fruitful method to gain knowledge on children's inner world and the complexities of their experiences (Mitchell, 2006). By asking the children to draw their favourite places in nature and by asking questions about their drawings, it is hoped to get more insight on what they find important in natural areas.

The drawing exercise follows the work and methods of David Sobel, who put the voices and experiences of children central in his research on children's value of self-constructed places. By asking children to draw their favourite and preferred outdoor areas, asking follow-up questions about these drawings and by conducting walk-a-longs to be introduced to his participants favourite places, he was able to put the children's voices in a central place in his research (Chawla, 2015). Similar to the work of David Sobel, this research has begun with the drawing exercise elaborated upon in the previous paragraph. The walk-a-long, which will be further explained in the next part of this section, has been based upon the drawing exercise. In the drawing exercise, children have been asked to draw their favourite places in nature. Drawing equipment has been provided for them, such as coloured pencils and stickers. While their creations were forming, questions have been asked in order to clarify what they were drawing and why they decided to draw this. Through their drawings and the answers to these questions, knowledge is obtained on which elements of the natural environment are important to the children participating in this research.

A shortcoming of this method, that needs to be kept in mind, is that the power relation between adult researcher and child participant is still at play. The children were only drawing in the first place because they were asked to draw something. In the end, the exercise was still a task that needs to be completed. The way the exercise was framed, in this case to draw their favourite place in nature, could have limited children's freedom and the outcome of their drawings as well, as the results of the exercise depended heavily on the framing of the question and are therefore limiting. Furthermore, the presence of the researcher influenced the outcome of the drawings as well. A stranger present in the room, whether they are watching the exercise closely or sitting further away, limits the freedom of the drawing exercise. The conditions under which the drawings come to be change the outcome of the research and should not be underestimated (Mitchell, 2006). Another pitfall of this method is that the results heavily depended on individual children's drawing skills. Some children may be more accomplished artists, but that does not

mean that the knowledge their drawings possess should be seen as more useful than drawings made by children with lesser developed artistic skills (Travlou et al., 2008).

Walk-a-long

The walk-a-long has followed the drawing exercise in an attempt to connect the imaginative inner world the children expressed in their drawings to their everyday lives. Walk-a-longs, or walking interviews, as Skår and Krogh call it, serve as a fruitful method when researching natural areas. They found that both the participants and researcher were more at ease when walking outside during the interview. Besides, being surrounded by the topic of the interview, urban green spaces, made it easier for them as researchers to relate to what their participants were talking about (Gearin & Kahle, 2006; Skår & Krogh, 2009). The embodied experience a walk-a-long provides is regarded as one of the most important benefits of this method. By engaging with the environment with the participants, this method offers the opportunity to connect the inner world of the participants to their lived experiences (Porter et al., 2010). Furthermore, by allowing the participant the power and freedom to choose the route, this method can be understood as an effective way to reduce the power imbalance between researcher and participant (Stevenson & Adey, 2011). Lastly, walking around the natural environment leaves room for silences, which leads to more insightful and less rushed answers to the research questions (Gearin & Kahle, 2006; Skår & Krogh, 2009). This research has used a similar approach, hoping this method has added insight of children's embodied experience and the way their surroundings are connected to their inner world to the study.

Directly following the drawing exercise, the walk-a-long followed the participants through their neighbourhood. Once they finished their drawings, the children have been asked about their favourite places in nature, and where they would be able to find such places in de Baarsjes. They were then invited to show these places. While walking, questions have been asked about the places they were showing, and also about their favourite places they have drawn, but which cannot be found in the neighbourhood. Finally, they have been asked during the walk-a-longs what they would change about the places they are showing, if they had the power to change anything. This has hopefully shone a light on how the natural attributes in the neighbourhood could be improved according to the children. Furthermore, by connecting the drawings to the walk-a-long, this method has hopefully showed the way the neighbourhoods current situation regarding urban green spaces matches the children's preferred situation.

However, this method is not without shortcomings as well. First of all, walking interviews are more difficult to record, so the results of the interviews will be less transparent when compared to indoors, sitting interviews (Porter et al., 2010). Second of all, the success of a walk-a-long heavily depends on unpredictable factors, such as the weather. This is difficult to plan and may alter the outcome of the research. The physical ability of the participants is an influential factor in this research method as well, affecting the length and route of the interview. But, most importantly, the safety of both researcher and participant is more difficult to guard in a walking interview. Especially when the participants are in control of the route, as is the case in this research, the researcher has little control over where the interview takes place and can therefore not control the safety of the chosen route. Heavy traffic and/or other people present might lead to difficult situations, which would not have arisen indoors. Safety concerns are not only physically, but also ethically. As the interview takes place in a public area, confidentiality cannot be guaranteed, as there is no control over who will see the researcher and participants and who will hear (parts of) the interview (Kinney, 2017).

Participants

This research has found its participants in a number of ways, which will be discussed below. A number of participants have been found via Facebook, with help of a group for inhabitants of De Baarsjes. Through a post in this group, with a brief description of the research and a request for participants, contact has been made with several mothers of De Baarsjes who wanted to be a part of the research. These contacts have

furthermore been used to find more participants, eventually providing this study with 3 participants between the age of 9 and 12, of which 1 boy and 2 girls. Besides this method, a number of participants has been found by setting up the exercise on locations in which many neighbourhood children were present. This has been done with the approval of the owners of these places, such as local petting zoos or community centres. A week before the exercise was planned, the study was announced on a poster, so regular visitors of these locations could be made aware of the upcoming research exercise. The children and their parents who were present at these locations on the days for which these exercises were planned were asked if they wanted to participate in the drawing exercise. If they were interested, the exercise was explained, as well as the ethical and privacy precautions and the aim of this research. After that, the age and gender of the children was registered. This group consisted of 11 children in total between the age of 7 and 12, of which 1 boy and 10 girls. All children participating in this research lived in, or in close proximity to, de Baarsjes.

This study focussed on children between the age of 7 and 12. This age group has been selected because children in the middle age of childhood, as the years between 6 and 12 are generally understood, have been found to possess the skills needed to articulate their wants and needs, and their likes and dislikes regarding their surroundings. They can evaluate their environment, and reflect on it as well (R. C. Moore & Cooper Marcus, 2008). Furthermore, from the age of 7 and onwards, children gain more and more independence over their lives and thus engage more freely with the world around them (Pynn et al., 2019). As this research focussed on the experiences and perspectives of children, the freedom to find out what they like and dislike is an important part of this research design. As previous research has pointed out a shift in children's attention and usage of natural areas after the age of 12, this research aims to take on no participants over the age of 12. Children under 12 have been found to engage in the natural world around them, but children over 12 seem to shift this attention to their peers, becoming more focussed on social worlds instead of natural worlds (Chawla, 2015).

This research aimed to limit the power dynamics and ethical issues at play in a number of ways. The ethical consequences of research with children are an important aspect to keep in mind. Such research must be ethical and respectful, and children deserve the same rights over the research material and study as adult participants usually have (Skelton, 2008). In order to create an environment in which these values are protected, this research has taken several precautions into account. First and foremost, participation was completely voluntary and children were free to drop out of the research at any given point, no questions asked. They were never pressured to participate in (parts of) the research if they did not want to, regardless of what the researcher discussed with their parents or guardians. The drawings children made in the drawing exercise were theirs to keep, the researcher only took a picture of the drawings in order to include them in the research. A parent or guardian was at all times present while doing the research and they were furthermore offered the transcript of the interviews once the recording was put into words. Permission to record was given beforehand and this was discussed with both the parents and children. Lastly, the names and characteristic aspects by which the children and their parents could easily be recognised are anonymized in order to guard the confidentiality of the participants.

As for the power dynamics at play between child participants and an adult researcher, several precautions have been included in the research. The children could decide if they wanted to participate in the exercises alone, or together with other participants, be it a friend or sibling. This way, the participants were the majority when compared to the researcher while engaging in the exercises. This is hoped to have given the participants a sense of control and power over the research, therefore limiting the power the researcher would have had, had it been a one-on-one interview. Furthermore, the children were in control over the pace of the exercises. They could take as much time as they wanted, and were free to postpone one (or more) exercises if they were not up for it in the moment. This way, it is hoped that the participants engaged voluntarily in the research, and not felt pressured to participate.

Qualitative data analysis

The data that is collected through the methods described above has been manually ordered by the researcher. Interviews have been recorded and were later transcribed by hand. The drawings have been photographed so they could be included in the result section. Any further observations have been noted down as detailed as possible. In order to analyse the collected data, this research has used the Gioia method, as elaborated on by Dennis Gioia and his colleagues. This method approaches the participants of a study as experts in their respective fields, whereas the researchers can be perceived as mere reporters, trying their best to present the reader with the truest version of their participants experiences. The Gioia method can thus be understood as an inductive approach, using the data as a starting point to find patterns and searching for theories which might explain those patterns. The approach can thus also be understood as a method which is grounded in its data (Gioia et al., 2013).

This grounded approach can be recognized in the way the data is analysed when following the Gioia method as well. This method takes two steps in making sense of its data. First, the interview transcripts have been subjected to first order analysis, which is directed by everything the participants deemed important. This analysis results in an unusually large amount of codes, which do not necessarily fit well together. This is important, however, to ensure that the research is guided by what the participants, the experts in their field and experiences, bring up and prioritize throughout the interview. The next step, the second order analysis, takes these codes and uses them to find underlying structures and themes. Together, this analysis of interview codes can be used to create second order aggregate dimensions, which can be used to build a figurative data structure (Gioia et al., 2013). This data structure, as well as the themes found in the first and second order analysis can be found in the appendix section.

This section has elaborated on the power dynamics at play when doing research with children, as well as the chosen methods for this study, their strong suits and pitfalls. It has given an overview of the ways in which participants have been selected, the reasons for the age group chosen for this study and the ethical precautions that have been taken into account while conducting this research. It has furthermore discussed the chosen method of qualitative data analysis used to structure the collected data of this study. Before the results of this study will be discussed, it is important to understand the background of the neighbourhood in which this research has taken place. The next section will focus on the context in which this study came to be: De Baarsjes.

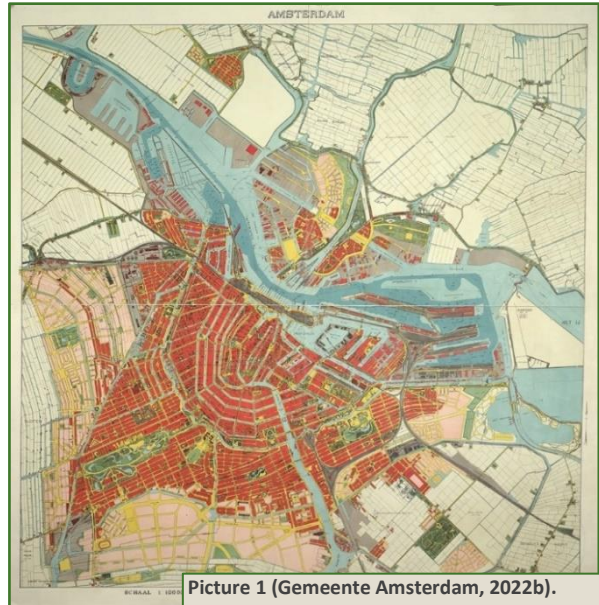
De Baarsjes

The area in which this research is conducted is the Amsterdam neighbourhood known as de Baarsjes. This neighbourhood is a part of the western district of Amsterdam and houses a little bit over 38.000 inhabitants in the 1.63 km² it entails (CBS, 2020). It is important to gain a deeper understanding of the area in which the participants of this study, as well as the researcher, have met each other. In order to arrive at such an understanding, this section will look into the history, social context, and current demographics of the neighbourhood de Baarsjes.

History

De Baarsjes celebrated its 100th birthday last year. In 1922, the area was far from being one of the least green neighbourhoods of the Netherlands. Located between the western border of Amsterdam and the small village Sloten, the wetland region we now know as de Baarsjes was used as farmland for fruit and vegetables. To someone living in the area during those times, de Baarsjes would be nearly unrecognisable today. Only a few attributes from those days can still be found today, such as the canals that used to function as waterways into the city, via which the fruits and vegetables grown in the wetlands could be transported and sold (Linssen, 2022).

A hundred years ago, the area was part of a campaign to expand the city of Amsterdam in order to create more houses, for which there was a dire need after the first world war. Plan West, as they called it, planned to evolve the farmlands on the western border of the city into two new neighbourhoods: Bos en Lommer and de Baarsjes. Picture 1 shows the outline of Amsterdam in 1922, in which these new neighbourhoods, as well as de Rivierenbuurt in the southern part of the city, are marked pink. The aim of Plan West was to realize 6000 new apartments, which would create living space for the new working class arriving in Amsterdam (Gemeente Amsterdam, 2022b).



Picture 1 (Gemeente Amsterdam, 2022b).

This new working class consisted of Dutch people, moving from northern, southern and eastern provinces to Amsterdam in order to find work. This group of people never really integrated in the city. Instead, during their time in de Baarsjes, they stuck together with the people they knew from back home. This behaviour led to the creation of a polarized environment. After living in de Baarsjes for a few years, these people moved on, leading to a lot of empty houses in the neighbourhood, which were by then in need of renovations but often overlooked by the city council. During this time, the neighbourhood saw a lot of inflow from inhabitants originating from Morocco, Turkey, Spain and Portugal (Linszen, 2022). This inflow, as well as the changes in the neighbourhood as an effect of the lack in renovation and maintenance, would give shape to the social context of the neighbourhood as we know it today. The next paragraph will look further into the social context of de Baarsjes, shining a light on how it came to be, and how it is changing again today.

Social context

The social context of de Baarsjes as we know it today starts to take shape in the late 80's, early 90's. As the first generation inhabitants of the neighbourhood moved out, maintenance and renovation of buildings was neglected and vacant storefronts and houses became a more and more familiar sight in de Baarsjes, criminal activities started to increase in the area. People who could afford it moved to more spacious neighbourhoods close to Amsterdam. Migrant workers came to take their place. Robberies, drug activities, violence and escalated street parties became common in de Baarsjes, causing the neighbourhood to be nicknamed the wild west of Amsterdam. Drug lords, arming their houses with bullet free glass and impenetrable steel doors, would rule their European drugs imperium from one of the main streets of de Baarsjes (van Eijck & Naafs, 2017).

Picture 2, de Baarsjes in 1930 (Gemeente Amsterdam, 2022a)



This trend eventually led to the inclusion of de Baarsjes in the so called Vogelaarwijk program (van Zoelen, 2009). The Vogelaarwijk, or Krachtwijk, program was introduced in 2007 and aimed to improve the 40 most problematic neighbourhoods of the Netherlands in terms of safety, integration, living conditions and (un)employment. Through financial donations and bottom up initiatives, this program targeted to improve the selected neighbourhoods both socially and physically (Permentier et al., 2013).

Although the overall success of this program is often up for discussion (Permentier et al., 2013), the goals set for de Baarsjes in the Krachtwijk program have since been met. The city council wanted to make de Baarsjes a more attractive neighbourhood for higher income families, using gentrification as a tool to reach this goal. In the seven years after the introduction of the program, an increase of movement from educated, young, Dutch professionals to de Baarsjes became apparent. The number of owner-occupied houses increased as the number of non-western migrants in the neighbourhood decreased (van Eijck & Naafs, 2017).



Picture 3, de Baarsjes, 2022

This latest shift in social context in de Baarsjes has led to a conflict between the new inhabitants of the neighbourhood, and the older generation residents. On the one hand have criminality number gone down drastically, are people no longer avoiding the once empty and criminally charged streets, and are empty storefronts and houses not anymore seen everywhere in de Baarsjes. But, on the other hand, long term residents and business owners complain that their needs are easily overlooked, that the issues they have to deal with are not being tackled, and that they do not profit from the latest investments that are being done in the neighbourhood. De Baarsjes is being rebranded more and more to cater to the needs of the middle class residents who have moved to the neighbourhood in the past years, to annoyance of some of the long term residents, who feel less and less at home in their neighbourhood and who often do not have the tools to speak up for themselves, unlike the younger generation (van Eijck & Naafs, 2017).

Current demographics

The tension between older residents of de Baarsjes and newer urban inhabitants elaborated upon in the previous subsection is reflected in the numbers presented by the municipality of Amsterdam as well. These numbers show that the area has welcomed a relatively large number of first time urban settlers: people who moved to the city from different parts of the Netherlands. This group mostly consists of people who are in their twenties or thirties and took up a total of 46% of people living in de Baarsjes in 2017 (Gemeente Amsterdam, 2017). This trend can also be seen reflected in the changing shopping offer, which more and more often caters to the needs of the newer inhabitants of de Baarsjes (Gemeente Amsterdam West, 2018), and in shifts on the housing market, on which more and more houses previously part of a social housing plan are being sold (Gemeente Amsterdam, 2017). On the other hand, however, do the numbers of the

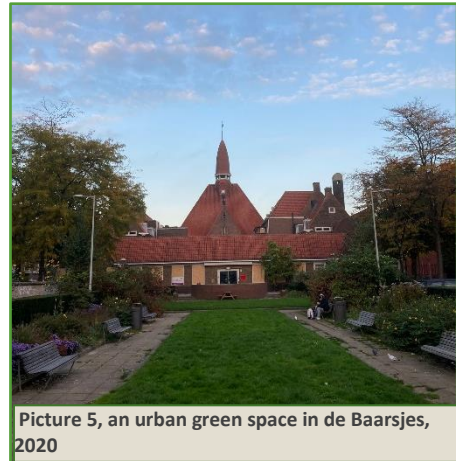


Picture 4, Mercatorplein, de Baarsjes, 2022

municipality show that de Baarsjes also houses a large group of people who live in poverty (Gemeente Amsterdam West, 2018).

Children are a relatively small group of inhabitants of de Baarsjes, with families making up only 25% of all households of de Baarsjes (Gemeente Amsterdam, 2017). The main issues children have been found to encounter in de Baarsjes are feelings of unsafety in the neighbourhood and few possibilities to engage in (athletic) activities in the natural areas (Gemeente Amsterdam West, 2018).

Inhabitants of de Baarsjes furthermore have relatively little urban green space to claim for themselves, as de Baarsjes is one of the most densely populated neighbourhoods from Amsterdam with a low number of natural areas. The neighbourhood houses very little green space, which also has to be shared with a growing numbers of visitors from outside de Baarsjes, such as tourists (Gemeente Amsterdam West, 2018). It may thus not come as a surprise that inhabitants of de Baarsjes reflect rather negatively on the urban green space at hand in de Baarsjes. They have been found to be unhappy with the facilities and maintenance of the green areas that can be found in the neighbourhood (Gemeente Amsterdam, 2017). Residents of de Baarsjes furthermore expressed a desire for more urban green spaces in their neighbourhood, which they could use as a meeting place with friends or a space to work out in (Gemeente Amsterdam West, 2018).



Picture 5, an urban green space in de Baarsjes, 2020

Before turning to the next section, which will focus on the results of this study, a final comment has to be made in regard of the (lack of) urban green spaces in de Baarsjes. As stated previously, de Baarsjes has been found to be one of the least green areas of the Netherlands (Natuur&Milieu, 2022). This is partly due to the fact that de Baarsjes does not have any parks within the official limits of the neighbourhood. It does, however, have two parks bordering its official limits, accessible to inhabitants of de Baarsjes but excluded from the official description of the neighbourhood (Gemeente Amsterdam, 2023). And while such official boundaries may limit the bureaucratic greenness of the area, it has often been found that the way urban dwellers experience their neighbourhood is not limited to the administrative boundaries of the area (Glas et al., 2019). It is thus important to keep in mind that urban green spaces used by children of de Baarsjes may not necessarily be located within the official limits of the neighbourhood. What matters more, is how easily accessible these places are to the children of de Baarsjes, a notion which will be addressed in the following section.

Results

In order to find an answer to the question *“To what extent do the urban green in de Baarsjes cater to the needs of children aged 7 and 12?”* this research has used four sub questions. First, the question of how children perceive the natural environment such as urban green spaces is answered. Second, a light is shone on how the children participating in this study have been found to use urban green space. Third, the ways these children have been found to be constrained in their urban green space usage is elaborated upon. Fourth and final, it is discussed how the children of this study would prefer to use urban green spaces. The remainder of this section will consist of four subsections, each focussing on one of these questions.

Children’s perception of the natural environment

In order to gain insight into the way the natural environment caters to the needs of children living in de Baarsjes, it is of importance to understand how children make sense of the natural environment. The aim of the first sub question is to paint a picture of children’s understanding of the natural environment. Three main findings have been detected when it comes to children’s perception of the natural environment: the physical locations connected to their perception of the natural environment, flora and fauna, and the embodied experience of the natural environment. These findings will be elaborated upon in the remainder of this subsection.

Physical locations

As the participants were asked to draw their favourite place in nature, many physical locations were brought to life on the paper. These locations gain insight in what the participants label as nature, and should thus be taken into account when trying to come to an understanding of what children perceive as the natural environment. Three main themes have been discovered when it comes to these physical locations: unspecific natural destinations, holiday destinations, and local destinations.

As may be expected, some participants drew and talked about grand, yet vague natural destinations. “A” forest, “the” beach, “a” lake, for example. When asked if they had a specific place in mind when these answers were discussed, they denied, explaining that they had drawn “*just any forest*”, or that they did not know which particular place they had brought to life on their drawing paper. An interesting addition to the unspecific natural destinations that were mentioned by the participants, is that the majority of the destinations mentioned have a connection to water. Especially the beach was often named as a popular place to be in nature. These unspecific natural destinations as part of the participant’s perception of nature is perhaps an obvious one, as these are all places of nature and thus match the description of the term natural environment. Even so, it should be taken into account when gaining insight of the ways children perceive the natural environment, for it indicates that, to children, nature is this grand, endless entity, something that cannot be limited by a single place. Unlike a child’s school, or the house of their best friend, nature can be found anywhere and is not limited to one place in the minds of children. This is good news for city planners intending to create more urban green spaces, as it indicates that every natural addition to the urban landscape has the potential to add to children’s natural view and experiences.

Holiday destinations were also often discussed, varying from a cottage in the Dutch countryside, to the capital of France. In most answers, the connection to why these holiday destinations could be perceived as the natural environment was clear. One participant had drawn the Mont Blanc, for example. She had visited the mountain during her summer holiday and had gone on various hikes with her family in the natural area surrounding the mountain, vividly recalling the excitement she had felt when climbing over mountain passes and narrow footpaths. Another participant told the story of a holiday home where squirrels would come into the yard and eat out of your hand. The fact that holiday destinations came to mind when discussing their favourite places in nature indicates that the natural environment does not necessarily have to exist in close proximity to children’s homes. It can be a faraway place they only visited once or twice, but still hold great meaning to them. Such findings can be of comfort to scholars who worry about a decline in natural contact for children growing up in an urban environment, for they indicate that it is the quality, not the quantity of natural contact that stands out most to children.

The most common answer when asked about the participants favourite place in nature, however, was a location which could be found nearby. Local parks or petting zoos were often named or drawn, including specific attributes by which these locations could be recognised. For example, one participant made sure to include a restaurant located in a local park in her drawing. Another, as can be seen in picture 6, added a specific statue to their drawing, which can be found in one of the parks in the neighbourhood. By including the locally famous ice bear statue, as well as the rabbits he had spotted in the park, the football field, and the picnic benches. By including these local attributes, he put great time and effort into illustrating that his favourite natural places are to be found close to



home. These examples go to show that some participants were specifically thinking about a nearby location when thinking about nature. Such results are valuable, because they clearly point out which of the local urban green spaces are important to neighbourhood children. For reference, the attributes this boy included in his drawing, such as the ice bear statue, picnic benches, and football field, can be seen below in picture 7 and 8.



Interesting to note, however, is that not all of these local destinations named by the participants would be classified as natural environment in the official sense of the word. Artificial playgrounds, or the playground by their school were common locations when discussing the participants favourite places to be in nature. One girl, when getting into detail about one of her favourite playgrounds, said that¹

[It is a] “playground with a lot of nature, where you just interact with nature. You can pretend that you live in nature, because all there is, is a rope, a wall, a slide and a tunnel. And a lot of grass.”

This indicates that, to them, the slide, wall and rope present at this playground is perceived as a part of the natural environment, despite not being natural in and of itself. Another participant took it a step further, by directly translating the question “what do you like most about nature?” into “what do I like most about de Baarsjes?”. She put a lot of effort into including the reframed question in their drawing, and it was the first thing she put onto paper when getting to work on the drawing exercise. This goes to show that the physical locations connected to the participants perception of the natural environment, do not always have to be (completely) natural. Some clear examples of this can be found in the drawing she made, for example of her school, and the small restaurant that can be found in one of the nearby parks. The drawings, and a picture of the restaurant for reference can be seen below in pictures 9, 10, and 11.



¹ Translated by the author from the following quote: “een speeltuin met veel natuur, en dan ga je gewoon om met de natuur. Eigenlijk kan je dan doen alsof je in de natuur woont, want het enige wat er is is een touw, een muurtje, een glijbaan en een tunnel en heel veel gras.”

Flora and fauna

Besides the physical locations connected to the perception of the natural environment as elaborated upon in the previous paragraph, flora and fauna were also named and drawn often when asked about their favourite parts of nature. Again, three trends can be found in the participants answers: exotic animals, local animals and flowers. These topics will be expanded upon below.

Exotic animals have been named by some participants as their favourite parts on nature, and should therefore be included in the ways the natural environment is perceived by the children partaking in this research. For one participant, exotic animals were the first that came to mind when asked about their



favourite things about the natural environment, which resulted in the drawing of a giraffe which can be seen in picture 12. For another, exotic animals such as white lions and tigers were brought up in the midst of a discussion about their drawing, signalling that these animals are worth mentioning when discussing nature, according to this participant. Similar to the holiday destinations named as favourite places to be in nature, the inclusion of exotic animals suggest that it is the quality of natural contact, more than the quantity, that leaves an impression on children, for it is highly unlikely that they come in contact with giraffes and white lions on a daily basis.

Other than exotic animals, local animals were often mentioned when discussing the natural environment. This ranged from the animals present at the site of the interview, such as rabbits, bunnies or horses, to local animals from their personal environment, such as a neighbourhood cat who was currently missing. Local wildlife was also often included, especially in the drawing exercise. Mainly the wild bunnies that roamed the nearby parks played a prominent role in many drawings, and therefore also in the way the participants perceive the natural environment. A picture of nature, it seems, is not complete without animals.

Finally, a select number of participants named flowers as one of their favourite parts of nature. A larger amount of participants included flowers and trees in their drawings. Most of these trees and flowers were an unspecific addition to what the respondents perceived as the natural environment. Trees, to fill their forest with. Or flowers, to accompany the animals they had drawn. Some children, however, called the floral part of their drawing out specifically. It could be their favourite tree, located close to their home, or their favourite flower. These call-outs signal that not all drawings of trees and flowers should merely be understood as decoration of the natural environment, some hold more meaning than others and play a bigger part in the perception of the natural environment.

Embodied experience

A rather striking finding when it comes to the perception of the natural environment, is how almost all the participants seemed to make sense of nature through embodied experiences. While the experience of nature was not included in the research questions, as it was deemed too vague to make sense of by the young respondents, almost all children partaking in this research went into great detail about how they experience nature as an embodied practice. The way nature is felt, smelt, tasted, heard and seen is thus an important aspect of the way the respondents perceive the natural environment. Nature is not merely seen and described, nature is experienced. Of course, seeing is a sense as well, but the interesting part is that, when the participants told stories of the ways they make sense of the natural environment, they went more

into detail about how nature felt, as to how it was seen. For example, one participant told the story of what it was like for her to go swimming in the nearby canal:²

"[...] every time I want to jump in [the water], it takes about half an hour or so. Because, in the beginning, the water is really cold. Eventually, you will get used to it.. and then, when you get out of the water, you get really cold again. Because by that time, you are used to the water."

While sitting at the table, drawing the pier where they would go to swim in the canal, the participant recalled how nature made her feel when they would get into contact with the water. During the walk-a-long, while showing the pier that she had included in her drawing, she told the story about how the water feels when you first jump in again, underlining the importance this experience held to her. This indicates that the way the natural environment makes them feel is an important aspect in the way the natural environment is perceived. Another comment, during another interview, paints a similar picture.³

"The warm sand. I like lying in the warm sand better than swimming in the sea. [yeah? What do you like about it?] yeah, I just really like it."

This quote shows that it is not just about what you do when you are at the beach, or who you go there with. The beach is one of her favourite places in nature because of how it makes her feel. This embodied experience meant more to her than the activities that could be engaged with on the beach, and is thus of importance when looking into the way the natural environment is perceived by the respondents of this study.

The way nature makes the participants feel was not the only form of embodied experiences that came to mind when talking about their favourite things about nature. One participant drew a tree, because her favourite thing about nature was the smell of the forest. Another had drawn a sunflower, her favourite flower because of the edible seeds. Yet another went into detail about the taste of seawater (disgusting, so he said) while drawing the ocean. All of these examples go to show that children's perception of nature does not end with the locations which qualify as the natural environment. The way nature is experienced by children, and thus the way they are connected to it, is just as much a part of their perception as their favourite park or animal, maybe even more so.

Children's usage of urban green spaces

After looking into the meaning given to the natural environment by the participants of this study, the second sub question takes a more practical approach, by looking at the ways the participants have been found to use the natural environment such as urban green spaces. Three themes were discovered in regard to this question: a place of interaction, claiming their place, and pushing boundaries. Each of these themes will be elaborated upon below.

A place of interaction

Urban green spaces are used by the participants of this study as a place of interaction in three ways. It can be a place where interaction between other people takes place. A place for children where interaction with animals is enabled. Or an opportunity to interact with the natural environment itself. The three ways in

² Translated by the author from the following quote: "En, ehm, ik vind, altijd als ik er in wil springen, duurt het echt iets van een half uur of zo. Want in het begin, is het koud water. Uiteindelijk ben je er wel gewend aan.. en als je dan uit het water bent heb je het dan, op dat moment weer koud. Want dan ben je weer gewend aan het water."

³ Translated by the author from the following quote: "het warme zand. Ik vind in het warme zand liggen leuker dan in de zee zwemmen. [oh ja? Wat vind je er zo fijn aan] ja, ik vind het gewoon heel fijn."

which the respondents in this study have been found to use the natural environment as a place of interaction will be further discussed in the remainder of this subsection.

Who children use the natural environment with is an important aspect of how they are able to use the natural environment such as urban green spaces. Most participants named their family members as the ones that would usually accompany them when they would get in contact with nature. Climbing a mountain with their parents and siblings on a family vacation, or a walk in the park with their aunt and her dog, which one participant put into their drawing, as can be seen in picture 13. Especially parents and/or household members were often mentioned as the ones to



accompany the participants into urban green spaces. As family members control a large part of children's daily life, it is of importance to look into the ways they facilitate or limit children's contact with the natural environment such as urban green spaces. The constraints section connected to the third sub question will shine some more light on the role of parents when it comes to the natural contact of the respondents of this study.

Besides family members, urban green spaces also provided the children participating in this study with a place to meet peers. These interactions would range from meeting up with a group of friends at a nearby playing area to engage in games or talk, to playing amongst children they had never met before at the nearby pier. In fact, some children named the fact that some natural areas are usually social and cosy⁴ as one of their favourite things about the natural areas in de Baarsjes. Such remarks indicate that the social aspects facilitated by urban green spaces hold importance to the participants of this study, as they make the connection between being out in the nearby natural environment and being with friends or meeting new people.

Urban green spaces furthermore offer children the opportunity to get in contact with animals. The animals they encounter shaped the way the participants of this study used the nearby natural environment. For some, the usage of nature often evolved around the animals they share urban green spaces with. This held especially true for children with dogs, whose main usage of nature occurred when they went outside to walk the dog. Others had to search a little bit harder to find the interaction with animals they were after when it came to their usage of the nearby natural environment. They would actively seek out the natural places where such interaction could occur, such as a local petting zoo. In such places, the participants of this study would use the natural environment to enable interactions with animals. The following example, of the boy participating in this research while at the local petting zoo, paints a picture of this:⁵

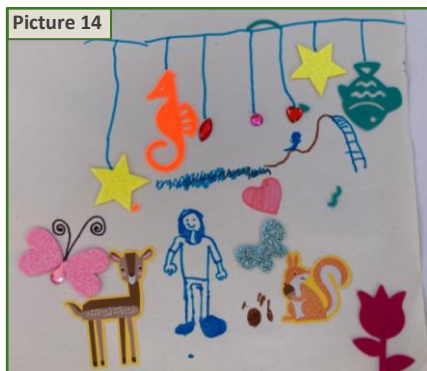
*"Then I go to pet the bunnies and such. And I'll look at the pigs and the guineapigs.
And the pigs sometimes act really energetic, but I find that funny."*

⁴ The participants used the Dutch word *gezellig*, which unfortunately is a rather untranslatable word. In an attempt to still do so, the author used the words social and cosy to best capture the participants meaning when talking about this.

⁵ Translated by the author from the following quote: *"dan ga ik konijntjes aaien en zo. En naar de varkens kijken en naar de cavia's. en de varkens gaan soms heel erg druk doen, maar dat vind ik juist grappig."*

This example goes to show that, for this participant, the interaction with animals provided by the natural environment, was one of his favourite usages of nature. In fact, during the drawing exercise, he left the table briefly to watch the pigs being fed, one of his favourite things because it caused the pigs to squeal and run around, which amused him. Another participants showed similar behaviour, jumping at the opportunity to pet the rabbits, as they had come out into the petting area. Such actions indicate that these participants prioritize contact with animals when out in the nearby natural environment, as they went out of their way to facilitate this contact, dropping everything they were doing as soon as an opportunity for contact with animals arose.

Lastly, many participants described how they would interact with nature itself when they were out in the natural environment such as urban green spaces. The ways they preferred to use urban green spaces ranged



from the very basic “*I just like to do something in nature*” to very detailed descriptions of games they would play, in which the natural environment played a pivotal role. Swimming was often put into drawing and mentioned as a preferable way to interact with nature, as can be seen in the drawing of a swimming pool and the participant going down a slide into the pool in picture 14. However, it has to be noted that this may be influenced by the fact that the interviews were held in summer, during which swimming might be an activity thought of more often when compared to winter. Climbing was another popular way to use urban green spaces,

whether this practice occurred in a favourite neighbourhood tree, or an official park with different climbing courses the participants could engage with. Whichever activity the participants preferred to engaged in, it became clear that the interactive part of nature, whether it be interaction with other, animals, or the environment, was an important part of the way they used urban green spaces.

Claiming their place

Another way the participants of this study have been found to use urban green spaces, is by claiming a place of their own in nearby nature. Two types of usage could be found: claiming ready-made places found in the natural places in their neighbourhood, and creating a place of their own in the nearby natural environment. Both these findings will be elaborated upon below.

When going out into nature, the children involved in this research would often visit ready-made places in de Baarsjes. They would use these places to claim their place in the neighbourhood, make a part of de Baarsjes a place of their own. A place to play, meet peers, and get lost in their imaginative worlds. Some of the ready-made places they used can be understood as places for children, such as nearby playgrounds were some participants would meet up and play with their friends. Others can be labelled as children’s places, such as the local pier. The pier, as can be seen in picture 15, is located on one side of a wide canal by one of the nearby parks. On warm summer days, the place is crowded with children. The other side of the canal has access to the water as well, but, as some participants explain, that is where all the adults go to swim. A clear distinction can thus be found: the pier on one side of the water is understood as a children’s place, the only ones using that place are the children and their guardians. Whereas the park side would be the domain of the older city dwellers. In design, both places are made with the same goal in mind, but in



practice, one has become a children's place, and the other hasn't, for only one side is claimed by and understood as "their" place, as explained by a number of children participating in this study. Such observations can be valuable for city planners, as they point out which neighbourhood spots hold meaning to children and should thus be taken into account when (re)designing an urban landscape which fits their needs. Especially in an area like de Baarsjes, where urban green space is scarce, it is meaningful to gain knowledge on the urban green spaces that are important to neighbourhood children, so these places can be protected and/or improved to further match the needs of the children using them.

Besides these ready-made places, the children partaking in this study also used the natural environment to create a place of their own. These self-acclaimed spots held great meaning to them, as one participant explained while telling about her desire for places for themselves in the natural environment⁶:

"[Do you have enough places of your own in nature?] Yes, we have built a treehouse, so now I go there all the time."

She further went on to explain how this place made her feel relaxed, how she used it to calm down and take some time for herself, away from the rest of the world. This place, meaningless or even invisible to a mere passer-by, was one of her favourite parts about nature and thus an important way in which this participant uses the natural environment. Especially since places like this girls treehouse can be difficult to locate or ascribe meaning to without the help of the children to whom these places hold importance, findings like these can be meaningful when (re)designing the urban environment. For such findings go to show that urban green spaces that hold importance to children can be found in unexpected places.

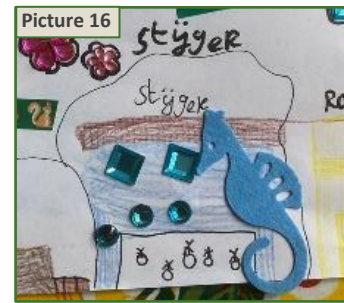
Pushing boundaries

A third way in which the urban green spaces are used by the participants of this study, is by making use of nearby nature to push their boundaries. Two kinds of boundaries have been found in regard to this: pushing physical boundaries, and pushing imaginative boundaries. The final part of this subsection will look into these two types, and how the participants of this study use the natural environment is to push both their physical as well as their imaginative boundaries.

The children partaking in this study have been found to use the natural environment to find the borders of their physical boundaries, and to stretch these borders if they can. This does not always prove to be without risk, as becomes clear in the story one participant told during a walk-a-long about the time she fell off the roof of a playground attribute, and how this caused her to break her arm. Despite this, she mentioned to still engage in the same activity at the same spot. Despite meeting her physical boundary, she was still drawn to this activity as soon as her arm was healed. The nearby natural environment challenged her to keep climbing higher and higher, to find out how far she could go. The children have also been found to use the natural environment to challenge each other into stretching their physical boundaries, such as the girls who challenged each other to swim a little bit further out into the deep end each time. By using the natural environment to push their physical boundaries, nature also provides children with a way to make sense of their abilities, and to feel a sense of victory every time they accomplish a little bit more, such as the participant who frequently visited a tree climbing park and who measured her ability by the height of the course they could complete. Through their contact with the natural environment, these children use urban green spaces to make sense of their abilities, illustrating how urban green spaces can play an important role in these children's physical developments and sense of self.

⁶ Translated by the author from the following quote: *"heb je genoeg plekken in de natuur voor jezelf? P2: ja, we hebben een hele boomhut gebouwd, dus daar kom ik nu heel vaak."*

Besides the physical boundaries of the participants, the urban green spaces were also used to stretch the boundaries of the children's imagination. To some of the respondents of this study, nature can be a place of wonder. They would use urban green spaces to envision more of the world than they could see, feel or hear. One participant, for example, drew the pier where she would go swimming. In this drawing, as can be seen in picture 16, she included fish. When asked about this, they said the following⁷:



"[Are there many fish by the pier?] I have never seen any, because they will swim away as soon as you jump into the water."

Despite the fact that she had never seen any fish, the deep, dark water gave her room to imagine these fish, swimming around her, always just out of reach but never far. A similar comment was made by another participant, who commented that one of her favourite things about nature were the animals who live there⁸:

"What I like about nature is that animals live there. [Yeah that's nice. Do you often see animals in nature?] Ehm, no, I don't often see wild animals. [Does that bother you?] No, not really."

Similar to the story about the fish, the fact that this girl rarely saw any wild animals, did not take away from her feelings towards nature. She liked nature, because of the animals living there. Whether she actually saw those animals or not did not change that. These examples go to show that the freedom and uncertainties of urban green spaces trigger children's imagination, and stretches what they believe to be real. The nearby natural environment alone was enough to imagine the animals living there, to imagine more than what could be found in real life.

The natural environment did not only push imaginative boundaries on all that nature encompasses for the respondents of this study. It also provided some participants with the room to engage in imaginative games they came up with themselves or with friends. For them, the natural environment offered the freedom to let their imagination take over. Without restrictions from existing play equipment, they would imagine entire lives for themselves, supported by the natural environment surrounding them. For them, nature was a blank page, which they could colour however they liked. Usages like these show the importance for (unstructured) urban green spaces, as such places offer children the opportunity to stretch the boundaries of their imagination and engage in elaborate play structures without the limitations of artificial playgrounds.

Children's constraints when using urban green spaces

When trying to find an answer to the research question of this study, it is not just of importance to look at the ways children make use of urban green spaces. The way children are constraint in their usage of urban green spaces deserves just as much attention. The third sub-question looks into these constraints. By doing so, three themes have been discovered: time management, physical safety, and emotional safety. This paragraph will shine a light on all of these types of constraints.

⁷ Translated by the author from the following quote: "Zitten er veel vissen bij de steiger? P1: ik heb er nog nooit een gezien, want ze gaan meteen weg als je er in springt."

⁸ Translated by the author from the following quote: "Wat ik wel leuk vind aan de natuur is dat er dieren leven. I: ja gelukkig maar he. Zie je vaak dieren in de natuur? P3: ehm, niet echt vaak wilde dieren. I: maakt je dat uit? P3: nee niet zo"

Time management

Time is a limited asset, and can only be spend once. Other factors taking up time in the lives of the participants constrain them in their usage of urban green spaces. Some of these factors, like school or their designated bed-time, are unavoidable or even necessary. Others, however, may not be so inevitable. It's this second group of time management constraints on which the next paragraphs will focus. These types of possible preventable constraints mentioned by the children participating in this study can be divided into two groups: time constraints put on them by others, and time constraints put on them by themselves.

The time the respondents of this study get to spend in the nearby natural environment, is heavily influenced by the amount of time they have been given by others, such as their parents, to spend however they like. As mentioned before, time is limited, and most children only have a few hours of free time every weekday after school. How they get to spend that time, however, is not always up to them. Many participants mentioned how their free time in the afternoon is often taken away by extra activities, such as sport classes or music lessons. This is often not limited to one day after school, some participants were enrolled in extra activities three or four times a week, leaving them with little free time to spend in urban green spaces if they so please. Other are not (just) limited by the responsibilities of these after school endeavours. One participant mentioned the following, after complaining about never going anywhere into the nearby natural environment⁹:

“[Or do you not have the time [to go into nature]?] Yes. [Are there other things you have to do?] Yes! [What sort of things?] Every day after dinner, I have to play a card game. [...] It's our tradition.

The family traditions this participant had to engage in every day were the main reason why she mentioned not to have any time to spend in the nearby natural environment, and were thus perceived by her as a time management constraint placed upon her by her family, taking away from free time she could have possibly spend in urban green spaces.

Besides time constraint placed upon the participants by others, the children engaged in this study also mentioned intrinsic time constraints. The pressure they put upon themselves, such as staying on top of their class, influenced the free time they could have spent in urban green spaces, if they so pleased. Such inherent constraints often took form of comparison to others, which led to doubts about their own qualities. This pressure to perform has been found to be connected to the children's performances at school, and the insecurities paired with these performances. One participant mentioned their concern about possibly having to re-do a year in school. When asked about the reason for that concern, they could not put it into words. Another mentioned the extra activities for children who perform well in school, and immediately mentioned another classmate who was doing better than them in in this class. As this focus on their school performances reaches beyond the school walls, the pressure to perform and spend more time on their school work, eats away from the participant's free time, otherwise possibly spend in the nearby natural environment.

Physical safety

Another constraint found in regard of the participant's accessibility of urban green spaces, is the concern for the children's physical safety. These constraints can be understood as parental constraints as well, since the parents of the participants are often the once installing the constraints connected to physical safety in order to keep their children safe. The constraints regarding the physical safety of the respondents ranged

⁹ Translated by the author from the following quote: *“heb je geen tijd? [ja] moet je andere dingen doen? [ja!] wat voor dingen? P1: elke dag na het eten kaarten, dat heet pesten. P2: waarom moet je dat doen? P1: dat is onze traditie.”*



from limiting the areas the children could roam, out of fear of busy roads the children would otherwise have to cross, such as the road that leads to one of the nearby parks in picture 17, to merely expressing their concerns about the safety of their children. These parental fears in regard of the physical safety for their children would constrain the children in their usage, for their fears would sometimes transcend to their children. One participant, for example, mentioned their parents fear of heights, and how it would scare them as well when climbing a mountain with their family while they were on

their summer holiday. Another group of participants shared in their surprise about the “dangerous” equipment they had been given while building treehouses, and the “danger” of the activity in itself. The fact that they exclaimed this after their guardians, who were seated next to us during the interview, had expressed similar concerns points to a connection between these revelations, although this cannot be known for sure. Such examples do show, however, that (regarded) physical safety plays a role in the accessibility of urban green spaces, as they can stand in the way of children freely using the nearby natural environment.

Emotional safety

The most influential constraint expressed by the children participating in this study, however, takes the form of emotional safety concerns limiting children in their usage of urban green spaces. Negative experiences and associations with nearby natural areas constrain the children in their access to these areas, which would otherwise have been available to them. Especially bad experiences with other people in the nearby natural environment could lead to a decrease in feelings of safety, which in their turn led to a decrease in usage of those natural areas. One participant, for example, mentioned the following as one of their least favourite aspects of the natural environment¹⁰:

“[...] Places where parties have been held, because they sometimes attract drunk people, and they scare me. [yeah, I can understand that, they can be very loud] Yeah, they will scream really loud, when they are drunk.”

Another example of a bad experience with strangers in a nearby urban green space paints a similar picture¹¹:

“Once, I was playing there with my friends. And we were playing tag, or something, and there was a man there, and he was kind of weird, because he was breaking into a house or something. I think he was drunk. And then, another girl said something like “Is he all right in the head?” and then he looked at us, and said “Do not call the police!”. He screamed that at us a few times, so I ran away as fast as I could because I was really scared, together with another girl. They went back later, but I was too scared to go back.”

¹⁰ Translated by the author from the following quote: “dingen die je niet zo leuk vindt in de Baarsjes? Of plekken waar je nooit naartoe wilt gaan? P2: de drukheid. Met auto's. P1: en, plekken waar feestjes zijn gehouden, want dan komen er soms dronken mensen en daar ben ik bang voor. [dat snap ik wel, die maken ook veel lawaai] ja, die schreeuwen echt keihard dan, als ze dronken zijn.”

¹¹ Translated by the author from the following quote: “Een keertje, ging ik met mijn vriendinnen daar spelen. En, we gingen iets van tikkertje doen, en toen was er een meneer, en die was een beetje raar want die ging een soort van inbreken of zo. Hij was dronken, denk ik. En toen zei een ander meisje zo van “Is die meneer wel goed?” en toen keek die meneer naar ons en die zei toen “je gaat niet de politie bellen!” en dat schreeuwde hij toen een paar keer en toen rende ik keihard weg omdat ik bang was, met een ander meisje. Daarna zijn hun weer terug gegaan, maar ik durfde niet meer.”

Especially the second quote shows how this participant was constrained in their usage of the natural environment because of not feeling safe. A place that used to be accessible to her became inaccessible after this experience, since she did not dare to go there again. The experiences connected to a place thus shaped the accessibility, and bad experiences may constrain children in their usage of the natural environment. It is important to gain an understanding of these experiences, especially in a neighbourhood like de Baarsjes where little urban green spaces are to be shared by many city dwellers for many different reasons. Picture 18 serves as an example of this. It is an image of the football field, earlier described by one participant as one of his favourite places to be in nearby nature, on a summers day. On the right side, at the end of the field, one of the goals posts is vaguely visible. The football field is not accessible at this time, however, for it is claimed by many neighbours meeting up with friends and enjoying the sun. This illustrates how the few urban green spaces de Baarsjes has to offer have to be shared by many different groups for many different reasons. As the people pictured here are, possibly, getting drunk while having fun with their friends, the emotional safety of the girl who stated that loud and drunk people made her feel unsafe in quote 10 on the previous page is threatened, making this field less accessible to her in the process.



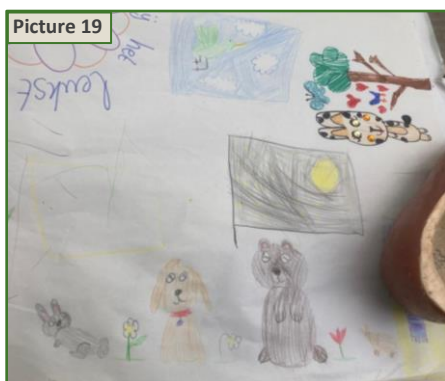
Emotional safety, when ignored, can become an invisible boundary limiting children's wanted access to urban green spaces. Results like these can thus be of importance when assessing the true geographic accessibility of urban green spaces. They furthermore underline the importance of including children's voices when looking into accessibility, for it is impossible to obtain such information without including children.

Children's preferred usage of urban green spaces

Finally, the fourth sub-question looks into the aspects of urban green spaces that hold the most meaning to the children participating in this study. Instead of focussing only on how they perceive, use, or are constrained in their usage of the nearby natural environment, this question leaves room for the participants to highlight what they find most important about their usage of urban green spaces, and thus what should be focussed on most when designing urban green spaces that cater to their needs. Three themes have been found in regard to this question, which will be discussed below: favourite activities, interaction with peers, and connection to nature.

Favourite activities

When asked what the participants of this study liked most about nature, and why, two types of favourite activities were mentioned: activities involving animals and activities involving interaction with the natural environment. Animals were often named or included in the drawings when favourite activities were discussed.



The drawings in picture 19, including bunnies, a dog, a bird and a bear illustrates this. Urban green spaces work as a facilitator for contact with animals, according to the children included in this study. The possibility for getting in contact with animals was named by one participant as his favourite aspect of the nearby natural environment. Others would just scream "Animals!" when they were asked about their favourite things in nature. A lack of animals, on possibilities for contact with animals, would also be named as a point of improvement of the nearby natural environment, highlighting that this contact needs to be

understood as a favourable way for the respondents of this study to use urban green spaces. Facilitating (possible) contact with animals should thus be included in urban green space design, if such spaces aim to cater to the needs of children.

Interaction with the natural environment was another favoured way to get involved with the natural environment. Just being in nature is not enough, the respondents of this study prefer to do something in and/or with nature. When asked about their favourite aspects of the natural environment, participants would tell about places they sometimes went where they were allowed the freedom and creativity to make something out of nature for themselves, such as treehouses. Getting active in nature was named as a favourite activity as well, as the following quote goes to show¹²:

“What I really like, at my place, there is a very big tree, and people have made a sort of ladder, that reaches the lowest tree branches, and so it is really nice to climb that tree.”

Not just the tree itself was important to this participant, the fact that it was made climbable made it one of their favourite parts about the nearby natural environment. The activities that would get the respondents of this study to interact with nature, instead of leaving them mere spectators to the natural environment, deserve more attention, as it was often named as a preferred way to make use of nearby nature.

Interaction with peers

A second favourable aspect of urban green spaces was the enabling of interaction with peers. When respondents were asked why a specific place was as their favourite part of the nearby natural environment, they would often name the familiarity with others as a main reason. They prefer to use urban green spaces, because they are places where children can get together with other children. Urban green spaces are places where children can recognise themselves in the people they meet; places where they know everybody, and where everybody knows them. They would often use the Dutch word “gezellig” to explain why the interaction with other children made the natural environment such a favourable place for them. This word is difficult to translate, as it can be interpreted in multiple ways. In this case, it should be understood as sociable and fun, as the following quotes show¹³:

“Because a lot of kids I know go there as well, so I really like it as well.”

“The playground is nice, a lot of people I know go there as well [so it is] really nice and fun.”

An important addition made by one participant, is that the familiarity of the people she shares the nearby natural environment with provides a sense of safety as well. Knowing others for a longer period of time, and being known in return, made her feel safe, because she trusted that the others would help her out in case she was in trouble. Urban green space, and the people she shared it with, could in this case be understood as a social safety net.

¹² Translated by the author from the following quote: “P2: ik vind het heel leuk, bij mij heb je zo’n hele hoge boom en daar hebben mensen zeg maar laddertjes op gemaakt tot waar de takken beginnen en daar kan je lekker op klimmen.”

¹³ Translated by the author from the following quotes: “Omdat daar ook heel veel kinderen komen die ik ken, dus dan vindt ik het ook heel gezellig .” and “De speeltuin leuk, en er komen wel vaak veel mensen die ik ken. [daarom is het] gewoon heel gezellig en leuk.”

Connection to nature

A third and final favourite aspect of urban green spaces named by the respondents of this study, is their connection to nature. Nature helps them sort out their feelings and provides them with a place of their own, which they could use however and with whomever they like. The nearby natural environment was named as their favourite place to be, because it helped them relax and get back to themselves, as one participant explained¹⁴:

“Because I’m outside a lot, it is my favourite place to be. And to unwind. [... Is it a good place to unwind?] Yeah, usually. Yes, it is a good place to unwind.”

Another painted a similar picture when discussing how being in the natural environment made her feel¹⁵:

“To sit on the ground, without a chair, so you can just feel what it’s like to just sit in nature, what it’s like to do that. [Yeah? And, how does that feel like?] it feels very freeing.”

Being in nature, and their connection to the nearby natural environment, helped these children relax, unwind, and feel free. Urban green spaces do thus not only hold importance to the participants of this study as a place to engage with animals, the environment, or peers, but also as a place to engage with themselves, and their feelings. These four aspects do not always blend well, as one respondent pointed out when talking about their treehouse, and the “stupid boys” who made loud noises and had wrecked part of their treehouse. They preferred to use nature as a place of their own, not shared with or spoiled by others.

When constructing an answer to the research question of this study, as the final sections of this thesis will do, it is important to leave room for all types of favourable usage of the natural environment, as the previous example shows that they do not necessarily match. This will be further elaborated in the discussion section, which follows the current section.

Discussion

This section will shine a light on the most important findings of this study, how these connect to the literature which has been presented in the theoretical framework, and how these findings provide an answer to the research question of this study.

This research has been built around the following research question: *To what extent do the urban green spaces in de Baarsjes cater to the needs of children between the age of 7 and 12?* The four most important findings of the results section will be presented here, as well as the way they fit in with or stand out from the literature presented in the theoretical framework. These findings will, all in their own way, contribute to the construction of an answer to the research question.

The first sub question focussed on children’s perceptions of urban green spaces. In regard to this, this study has found that nature is mostly understood by its participants as an embodied experience. This finding suggests that the Biophilia theory, as presented by Wilson in 1984 deserves more attention. The Biophilia theory states that people have an intrinsic connection to the natural environment; that they understand themselves and the world around them through contact with nature (Heerwagen, 2009; R. C. Moore &

¹⁴ Translated by the author from the following quote: *“Omdat ik heel veel buiten ben, en het is ook gewoon mijn lievelingsplek. En om tot rust te komen. I: als je even rust wil ga je het liefst naar de natuur? [ja] is het altijd rustig? Kom je daar goed tot rust? P2: meestal wel. Ja, ik kom er wel goed tot rust.”*

¹⁵ Translated by the author from the following quote: *“Op de grond mag zitten, zonder stoel, dat je een keer gewoon kan voelen hoe het is om gewoon te zitten in de natuur, hoe het voelt om dat te doen . I: oh ja! En, hoe voelt dat dan? P2: het voelt heel bevrijdend.”*

Cooper Marcus, 2008). The bodily connection to the natural environment, mentioned time and time again by the participants of this study, highlights the presence of the Biophilia theory in the results of this study. The way the participants understood nature has been found to be closely connected to their sensory experiences of nature: the taste of salt water on their tongue, the warmth of the sand while lying on the beach, the sound of pigs waiting on their dinner. The participants could still recall the way this made them feel, and would name these bodily experiences when going into detail about their favourite things about nature. This indicates that the connection between the children participating in this study and the natural environment, is an important part of the way they experience the natural environment. As all participants of this study lived in an urban area with few urban green spaces at hand, these findings furthermore point in the direction of biophilia as a biological connection to the natural world, since the participants had little opportunity to connect with the natural environment and still expressed their embodied experience and connection to nature. These findings thus suggest that authors like Kellert and Wilson (1995), who believe that biophilia is something all human beings are born with, are closer to the truth than authors like Orr (1993), who believe that biophilia is an active choice that has to be made and nurtured.

While feelings and experiences are perhaps a vague notion, the fact that the embodied experience of nature was mentioned in all interviews conducted during this research, and all of the times indicated by the participants themselves, proposes that this is an important aspect of the way children use the natural environment and thus deserving of more attention. Urban green spaces in de Baarsjes can, according to these findings, only cater to the needs of neighbourhood children when they leave room for interaction with the natural environment, in order to facilitate the embodied experiences children have expressed to crave.

In regard to the second sub question, focussing on the ways children have been found to use urban green spaces, this study has found that the natural environment like urban green spaces encourages children to push their boundaries. The two most prominent ways in which the participants of this study have been found to push their boundaries via their contact with nearby nature is the pushing of imaginative boundaries, and the pushing of physical boundaries. Dark bodies of water, fields of grass and the hint of a forest can be the spark that light the imaginative world of children, making real, at least to them, the endless wonders of the natural landscape. The girl who was so sure of the presence of fish in the body of water she would go swimming in during warm summer days serves as a colourful example of this. Despite never having seen these fish, she envisioned them, swimming below her in the depths of the pond, brought to life by her imagination. Nature can thus be understood as a rich tool to expand the inner world of children. Nature is exceptionally good at this, as pointed out by the work of Richard Louv, because it allows children the freedom to envision what they want to see. It does not resemble anything, is not made up by adults, and can therefore be whatever a child wants it to be, stretching the boundaries of what a child thinks is possible and knows to be true in the process (Louv, 2005).

Besides these imaginative boundaries, the natural environment also seemed to encourage the participants of this study to stretch their physical boundaries. Yes, sometimes they would get hurt, as one story of a broken arm goes to show, but such causalities did not stop the respondents from trying again, reaching for new heights as they went. To the participants, broken bones and bloody knuckles were a lesson learnt, but not a reason to abstain from their contact with the natural environment. Dangerous? Maybe. Fun? Definitely! While the parents and guardians often expressed their concerns regarding the physical safety of the children during the interviews and walk-a-longs, the children themselves did not seem to be constraint in their contact with the natural environment because of the physical dangers they might encounter. This is in line with the work of Lia Karsten, who, amongst other things, found that parental fears regarding the physical safety of the outdoors were keeping children growing up in Amsterdam in the early 2000's indoors (Karsten, 2005). The findings of this study suggest as well that it is mostly the parent's fears of bodily harm

that limits children in their natural contact, while children themselves are rarely put off by the physical dangers of the natural environment.

This is an important aspect to note for two reasons. First of all, the results of this study also found that parents or family members were the ones who would most often accompany children in their usage of urban green spaces. Thus, urban green spaces need to facilitate children's needs to push their imaginative and physical boundaries by being challenging and engaging, while simultaneously being perceived as safe (enough) by their parents or guardians to remain accessible to children. Because children can only gain access to urban green spaces when they are granted access by their parents or guardians. Second of all, since the aim of this study was to gather knowledge on children's voices and experiences, as they are too often left out of the scientific debate on children's engagement with nature (Adams & Savahl, 2017), differences in perspective like these are a valuable illustration of the importance of including children's voices and experiences in future research. For these differences go to show that children and their parents/guardians do not necessarily have similar voices and experiences when it comes to engagement with urban green spaces.

There is another form of safety that has also been found to constrain the participants of this study in their usage of the natural environment. The results of this study connected to the third sub question regarding children's constraints in their usage of urban green spaces suggest that the emotional safety of children can have a huge effect in the way children make use of the natural environment. Their past experiences of an area can put them off from going there again, and negative experiences are not so easily forgotten. Furthermore, what the participants of this study label as dangerous could differ from what adult city dwellers might label as dangerous. The girl who expressed her fear of drunken people is a clear example of this. Students meeting up with friends in the park and having a beer in the sun could seem harmless to an adult, but might put children off from going to the park on sunny days. The way children experience safety in the nearby natural areas of their neighbourhoods deserves more attention, as the results of this study show that children's emotional safety is equally important, or even more so, than physical safety when it comes to the way they are constraint in their usage of the natural environment. Especially in an area like de Baarsjes, which is scarce in urban green spaces, the emotional safety of children is an important aspect to keep in mind when (re)designing urban green spaces that cater to the needs of children, for they have to share their nearby natural surroundings with many neighbours who could potentially threaten their (emotional) safety. It could thus be argued that urban green spaces can only cater to children's needs when children's emotional safety is harboured and put front and centre. This can only be achieved when children's voices and views are included in research, for they need to be understood as actors in the urban landscape, making sense of the world around them in their own way and thus providing researchers with an unique point of view and adding knowledge nobody else can provide.

These findings furthermore underline the important influence of subjective factors when it comes to geographic access to urban green spaces. Subjective factors such as the past experiences of the girl in regard to the drunken people affect geographic access to urban green spaces in ways that can easily be overlooked when children's voices are not included in scientific research. In line with the findings of Bhuyan (2022), the findings of this study thus argue that, when estimating children's geographic access to urban green spaces, subjective factors such as perceived safety and past experiences need to be included.

Finally, the fourth sub question was centred around children's preferred usage of urban green spaces. This study has found that the natural environment serves as an important place for its respondents to meet up and play with other children, or to create a special place for themselves, such as the treehouse one respondent mentioned as her favourite place to unwind and to be outside. The natural environment as a place to meet peers has been studied by a number of scholars before, who came to similar findings (Chawla,

2015; Skår, Gundersen, et al., 2016). Margrete Skar and her colleagues, for example, stressed the importance of the natural environment as a place to make new friends, regardless of gender, age and social class (Skår, Gundersen, et al., 2016). Louise Chawla, on the other hand, highlights the importance of nature as a place of solitude. Where else can a child still be alone, claim a place that is just for them (Chawla, 2015)? These findings, which correspond with the results of this study, highlight the importance of understanding nature as a place where children can satisfy two needs: the need to meet up with other children, and the need to be on their own. When stressing the importance of nature as a children's place, or a place of their own, there should thus be room to understand that phrase in two ways: a place to meet up with peers, and/or a place to find themselves. In the creation of urban green spaces that cater to children's needs, it is thus of importance to create room for both these experiences at the same time. Suggestions on how that could take form will be presented in the next section, as well as a summary of the most important parts of this study, some self-reflective comments, and recommendations for policymakers and future researchers.

Conclusion

This study originated from a possible clash between the urban reality of de Baarsjes, and the needs of the children growing up in this neighbourhood in the west of Amsterdam. Last year, de Baarsjes was found to be one of the least green neighbourhoods of the Netherlands (Natuur&Milieu, 2022). A worrying prospect, according to the work of many scholars in the field of Children's Geography, who found a positive correlation between social, physical, and emotional developments in children and contact with the natural environment (Chawla, 2015; Louv, 2005; Skår, Gundersen, et al., 2016; Skår, Wold, et al., 2016). This research has been focussed on amplifying the voices of children growing up in de Baarsjes, to find out what these children themselves think of, and how they make use of, the urban green spaces at hand. The following research question has been used to discover the wants and needs of the young urban dwellers of de Baarsjes when it comes to usage of the natural environment: *"To what extent do the urban green spaces in de Baarsjes cater to the needs of children aged 7 and 12?"*. The purpose of this study has been twofold. First and foremost, this research wanted to find out how the children of de Baarsjes, understand, use, are constraint in their usage, and would prefer to use the nearby natural environment. In the process of answering these questions, this study also wanted to illustrate that children should be understood as active members of (urban) society, shaping the landscape around them like any other member of society. Their voices should be included in research and urban planning more often, as they are currently a group who are often perceived as mere bystanders in the urban environment, instead of the active participants they actually are (R. C. Moore & Cooper Marcus, 2008).

This study has found that, when designing urban green spaces that cater to the needs of children of de Baarsjes, three main points should be taken into account. First of all, the natural environment provides children of de Baarsjes, in the best case scenario, with a place of their own. A place where they can push both imaginative and physical boundaries and where they can meet up with peers, or, when preferred, spend time in solitude. Natural areas as a place of their own should be understood in all these senses of the phrase, and urban green spaces can only cater to the needs of the children of de Baarsjes if it does the same. Urban green spaces should thus create room for engagement with both the surroundings, and other children. Second of all, contact with nature proved to be essential for the participants of this research. The natural environment has been found to be a mostly embodied experience for the children participating in this study, just looking out on patches of green is not enough, they want to get in touch with nature, feel, taste, and/or smell the natural environment. Only when these embodied experiences are facilitated, will the natural environment of de Baarsjes cater to the needs of children growing up there. Finally, in order to create truly accessible urban green spaces for the children of de Baarsjes, it is important that the emotional safety of children is taken into account as well. Feeling safe in the social environment of urban green spaces

has been found to be more constraining in the usage of the natural environment than possible physical safety dangers. The natural environment of de Baarsjes, small as it may be, could still provide the children growing up in the area with a place of their own, but only when these three main points are taken into account. Policy makers are urged to include children's voices such as this study provided when (re)designing the urban landscape, for it is ultimately their task to provide the young urban dwellers of de Baarsjes with the urban green spaces they need and deserve.

These key findings add to the scientific debate on children's engagement with the natural environment such as urban green spaces in four ways. First and foremost, they go to show the importance of including children's voices in future research. Seemingly contradicting results, such as the findings that children prefer to use urban green space both as a place to meet up with peers and be social, and as a place to retract from society and spend in their own company, show the complexity of children's preferred usage of urban green space. Results like these highlight the importance of involving children's voices and experiences in research and urban planning when aiming to design urban green spaces that cater to their needs.

These results furthermore go to show that children add a certain knowledge and perspective to the scientific debate on natural engagement nobody else can provide. Not including children in future research thus not only robs them of their right to have their voices heard, but also robs the scientific discourse of valuable knowledge (Chawla, 2015). The findings connected to emotional safety underline this, for it would have been impossible to detect children's (negative) experiences with urban green spaces had their voices not been included in this research.

Additionally, the findings on emotional safety highlight the importance of including subjective factors when looking into geographic access of urban green spaces. The ways the participants previous experiences influenced their usage of urban green spaces indicate that objective factors such as proximity and quantity of urban green spaces do not paint the entire picture when it comes to assessing geographic access to the nearby natural environment. Subjective factors, such as feelings of safety and past experiences, deserve just as much, if not more, attention (Bhuyan, 2022). Especially since this study has found that children appreciate the quality of urban green spaces and natural engagement over the quantity, hinting that few urban green spaces in which all children's needs are met cater better to their needs than many urban green spaces which only facilitate a handful of the attributes children appreciate in the natural environment.

Lastly, the findings of this study suggest that the biophilic notion which all participants expressed in this research can be understood as an intrinsic value people are born with, although more research on this topic is needed. However, the fact that all participants valued the embodied experiences urban green spaces facilitated for them, despite the fact that all participants grew up in an urban area with few urban green spaces to spark their connection to the natural environment, points in the direction of biophilia being a biological connection between humans and the natural world (Adams & Savahl, 2017; Louv, 2005).

Reflections

In academic research, it is important to be aware of limitations while conducting a study, both of the researcher and the research itself. In total, four shortcomings of this study will be discussed here, first looking into a limitation caused by the attributes of the researcher, and then turning to the limitations caused by the data collection format of the research.

As the researcher of this study is a Caucasian female in her late twenties, it is possible that she did not have equal access to all members of the neighbourhood in which the study was conducted. De Baarsjes is a multicultural neighbourhood with city dwellers from many ethnic backgrounds, as elaborated upon in an earlier section of this thesis. The researcher may have struggled to include a fair representation of

neighbours in this study due to her background. It should be taken into account that the results of this research may have been influenced by this.

A limitation of the data collection of this study, is that most participants have been selected on site. This may have influenced the outcome of this research, as most of these children were already in the natural environment when they were interviewed, and were thus likely to have a connection to or opinion of the nearby natural areas. A way to solve this, in possible future studies, is to hold interviews at local schools, in an attempt to speak to all sorts of children in the neighbourhood, instead of just the children who could already be found outside in the natural environment.

Another shortcoming of the data collection format of this study is the time limit in which the data is gathered. The relatively short time period in which the data for this study is collected may have influenced the outcome. For instance, since the collection of data was done during spring and summer, children may have been more positive towards their natural experiences, compared to when the data would have been collected during autumn or winter. It would be an interesting addition to this body of work to collect data for a longer period of time, in order to see if this would influence the outcomes of this study.

Lastly, the qualitative forms of data collection used in this study have provided rich data, but from a small number of respondents. An addition of quantitative methods, leading to a mixed methods approach, would have been a valuable addition to this research, as it would provide it with a larger body of data on which to base the conclusions of this study. If, for example, more information could be gathered on a larger number of children's places across urban green spaces in de Baarsjes, it could become more clear which natural places hold meaning to neighbourhood children, and thus which urban green spaces should be preserved or improved.

Recommendations

Finally, this paragraph will present a number of recommendations based on the findings of this study. These recommendations are addressed to (future) researchers, interested in the field of Children's Geography, and to policymakers, responsible for urban landscapes that should cater to the needs of all city dwellers, children included. But first, an important aspect highlighted by the results of this study for both policy makers and researchers will be addressed. In general, this study has shown that children could and should be understood as active members of (urban) society. The way they make sense of their surroundings is unique, and should be included in studies and decision making more often and more carefully. The following recommendations should thus be understood as an attempt to make this inclusion a reality.

Future researchers who take an interest in Children's Geography are recommended to slightly alter the data collection format of this study, in order to obtain more inclusive results. It would be interesting, for example, to conduct a similar study at a local school, so that a bigger variety of voices is included, not just of those who already made use of the natural environment. Another interesting variation on the data collection format that would be fruitful for future research, is to conduct this study over a longer period of time. That way, the influences of the seasons could be measured and taken into account as well. Most preferable would even be to repeat this, or similar, research ever-so-often, so changes in behaviour can be uncovered and measured.

Policy makers are recommended to understand children as full members of society, with a right to have their needs met just as much as any other city dweller. In order to do this, policy makers are urged to work bottom up when designing urban areas for children. Only when children's experiences of the natural environment are regarded, can urban green spaces be created that cater to all needs. A few specific things are important when trying to do this. First, the duality of the experience and usage of nearby nature must be taken into account. As the findings showed, children sometimes preferred to use nature as a place to

meet peers, and sometimes as a place of solitude. A fitting natural area is able to cater to both these needs at the same time. Second, the emotional safety of children must be taken into account. The creation of physically accessible natural areas is not enough, as the findings of this study highlighted. It is of importance to create spaces where children are understood to be the most important users, where their needs are placed front and centre. Places where children can get in contact with the natural environment safely and freely, where they can meet with peers if they like, or spend time with themselves. Places such as Het Landje and Stadsboerderij Zimmerhoeve, where data for this study was partly collected, should thus be understood as important additions to the urban landscape, for they provide children of De Baarsjes with opportunities to freely and safely get in contact with the nearby natural environment.

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Appendix

code book			
first order analysis		second order analysis	second order aggregate dimensions
de zwemsteiger bij het park	locatie	fysieke locatie: wat hebben ze getekend, waar hebben ze het over in het interview, welke plekken scharen ze onder "natuur"?	Definiëring natuur. Totaal aantal codes: 66
een bos.	locatie		
meertjes	locatie		
Erasmuspark	locatie		
Terrasmus	locatie		
Westerpark	locatie		
het strand .	locatie		
de stijger	locatie		
Mijn school	locatie		
het plein	locatie		
er is een klimrek, en trampolines, en een klein klimrekje met een glijbaan, en een basketbalveld waar je ook kan voetballen, en een heel groot voetbalveld. I: zo, dat is wel veel ja! P1: alleen, mijn vriendin zei dat het werd verbouwd dat er echt van die trampolines kwamen, zoals bij jumpscare een beetje. Alleen, dat is nog niet gebeurd. [zou je dat leuk vinden?] ja *lacht*	invulling locatie		
speelpleintje voor de deur	locatie		
deze boerderij	locatie		
bossen	locatie		
Amsterdamse bos	locatie		
het vondelpark	locatie		
de kinderboerderij?	locatie		
je kan hier (boerderij) naartoe	locatie		
een strand	locatie		
Parijs	locatie		
Disneyland!	locatie		
de mont blanc	locatie		
de berenkuil, bij het strand	locatie		
stuifzuid? Stuifstuif?	locatie		
een berg	locatie		
een berg in de alpen	locatie		
vakantiehuis	locatie		
Brabant	locatie		
speeltuintje voor de deur	locatie		
naar het kabouterbos.	locatie		
natuurspeeltuin.	locatie		

een speeltuin met veel natuur, en dan ga je gewoon om met de natuur. Eigenlijk kan je dan doen alsof je in de natuur woont, want het enige wat er is is een touw, een muurtje, een glijbaan en een tunnel en heel veel gras.	locatie		
konijnen zijn een van mijn lievelingsdieren .	dieren	Dieren: alle keren dat dieren genoemd worden als onderdeel van de natuur in de interviews, welke dieren genoemd worden	
een giraf	dieren		
ik hou zelf ook heel erg van konijnen en vossen en... [jij houdt van dieren dus?] ja ik hou heel erg van dieren.	dieren		
Wat vinden jullie het leukst aan de natuur? P2: giraf !	dieren		
blauw vogeltje	dieren		
een vlindertje	dieren		
jullie houden wel van dieren he? [ja!] vinden jullie dat ook het leukst aan de natuur? P1&2: ja.	dieren		
een hondje	dieren		
(over een mol) ze kunnen niet goed zien, maar wel heel goed ruiken .	dieren		
ik heb duizenden lievelingsdieren .	dieren		
lievelingscavia	dieren		
diertjes	dieren		
hond .	dieren		
eekhoortjes	dieren		
dieren	dieren		
Wat ik wel leuk vind aan de natuur is dat er dieren leven.	dieren		
kijk, mijne is al best wel mooi. Mijn lievelingsdieren zijn witte tijgers. Of eigenlijk witte leeuwen. En vleermuizen. En, ehm, en vossen. En dat was het. I: wel bijzondere dieren allemaal. I: wel bijzondere dieren allemaal. P3: ook paarden! Ik ben fan van paarden .	dieren		
ik heb een bloem getekend! Maar ik wil er nog een tekenen. P2: ik wil een mega zonnebloem tekenen.	natuur	Bloemen: elke keer dat bloemen genoemd werden of getekend werden als specifiek onderdeel van de natuur	
mijn lievelingsbloemen .	natuur		
en vinden jullie nou dat er genoeg natuur is in de buurt? P1: nee. P2: nou bij ons, hier, daar zijn nog redelijk veel bomen. Maar bij drogere gebieden, hmm ja. P1: Bij ons heb je wel het park, maar als je verder loopt zie je amper bomen. Je ziet wel heel veel	verbeterpunt / wat er verstaan wordt onder natuur	Kadering natuur: wat er wel/niet verstaan wordt onder natuur, waar trekken de participanten de grens bij wat ze onder natuur	

grasveldjes, maar er groeit bijna niks en het grasveld is ook helemaal leeg.		verstaan? Wanneer is iets niet meer natuur?	
een leeg grasveld, dat is eigenlijk niet genoeg natuur voor jullie? P1: nee. Er mogen wel een paar bomen bij .	wat verstaan wordt onder natuur		
he, maar ja komt niet zo vaak in de natuur. Vind je dat jammer? [ja] waarom vind je dat jammer? P1: ik ga alleen naar de speeltuin .	definitie natuur		
wat vind je nog meer leuk aan de natuur, wat je kan tekenen? P3: ehmm. Dat de wereld is ontstaan. Oh nee wacht, dat is de ruimte. I: is de ruimte ook natuur? [nee]	definitie natuur		
("het is koud!")	Lichamelijke ervaring van de natuur / voelen	lichamelijke ervaring: elke keer dat de participanten begonnen over hoe ze natuur ervaren; voelen, ruiken, horen, de manier waarop de participanten natuur beleven en waarom het belangrijk is voor ze. Belangrijk punt hierbij is dat hier niet naar gevraagd is in de interview vragen, in alle interviews kwam het vanuit de participanten zelf ter sprake. wat natuur is, is hoe ze het beleven, de zintuigelijke connectie die er gemaakt wordt is wat ze bij blijven en waar ze in de interviews over beginnen. de beleving van natuur.	
En, ehm, ik vind, altijd als ik er in wil springen, duurt het echt iets van een half uur of zo. Want in het begin, is het koud water. Uiteindelijk ben je er wel gewend aan.. en als je dan uit het water bent heb je het dan, op dat moment weer koud. Want dan ben je weer gewend aan het water .	Lichamelijke ervaring natuur		
wat je ruikt in het bos	lichamelijke ervaring / ruiken		
ik vind ook heel, mijn moeder en vinden ook heel leuk hoe het bos ruikt.	lichamelijke ervaring / ruiken		
: gek geluid maken de kippen he? [gelach] hadden jullie ze al gezien? [ja, die ene heeft een mooi pluimpje] ja he!	afleiding omgeving / lichamelijke ervaring natuur / geluid		
het warme zand. Ik vind in het warme zand liggen leuker dan in de zee zwemmen? [oh ja? Wat vind je er zo fijn aan] ja, ik vind het gewoon heel fijn.	lichamelijke ervaring natuur / voelen		
het is heel warm .	lichamelijke ervaring natuur / voelen		
ik vind het vooral leuk aan zonnebloemen dat je de pitjes kan eten	lichamelijke ervaring / proeven		

op de grond mag zitten, zonder stoel, dat je een keer gewoon kan voelen hoe het is om gewoon te zitten in de natuur, hoe het voelt om dat te doen . I: oh ja! En, hoe voelt dat dan? P2: het voelt heel bevrijdend.	lichamelijke ervaring / interactie met natuur / positieve ervaring		
ik wil zo meteen een paard aaien!	interactie met natuur / lichamelijke ervaring		
ik heb een keer zeewater geproefd, het was super vies.	lichamelijke ervaring / proeven		
in contact te laten komen met dieren.	Contact met dieren	Dieren: hoe er gebruikt gemaakt wordt van de natuurlijke omgeving waarbij dieren genoemd worden als belangrijkste motivator	Hoe. Totaal aantal codes: 63
En heb je wel eens een echte giraf gezien? P2: [luid en duidelijk] ik zeker! [waar?] Artis!	interactie met natuur		
contact gemaakt kan worden met de dieren	interactie natuur		
paardrijden, leuk.	interactie natuur / gebruik omgeving		
schommelen. Of met de dieren. (P1: ja met de dieren!) [uit de intonatie lijkt of ze dit eigenlijk toch leuker vinden dan schommelen].	interactie natuur / gebruik omgeving		
in de nacht gaat hij wandelen! I: in de nacht? Spannend! Heb je dat wel eens gedaan? P2: om de hond uit te laten .	gebruik maken van natuur / interactie met natuur		
gaan jullie vaak mee lopen met de hond van je tante? [knikt van ja] oh leuk!	gebruik maken van natuur		
dan ga ik konijntjes aaien en zo. En naar de varkens kijken en naar de cavia's. en de varkens gaan soms heel erg druk doen, maar dat vind ik juist grappig.	interactie met natuur		
dennenappels naar mijn zus gooien .	Activiteit/interactie met natuur	Interactie met omgeving/natuur: Hoe er gebruik gemaakt wordt van de fysieke omgeving. Zowel gebruik/manipulatie van natuurlijke omgeving als de gemaakte omgeving (speeltoestellen ed). Wat de participanten noemden als leukste	
en soms zwemmen .	Activiteit/interactie met natuur		
zwemmen .	activiteit / interactie met natuur		
klimmen. Het gaat tot en met 10. Parcours 10. En ik ben tot 3 gegaan. Mijn vriendinnen komen tot 4.	interactie met locatie		
rijden met de fietsen.	interactie met natuur		
takken zoeken.	interactie met natuur		

een picknick !	interactie met / gebruik maken van natuur	(om te doen) in de natuur	
mijn knie prikt omdat ik er twee keer ingezaagd heb. I: wat had je gedaan? P2: in mijn knie gezaagd. Hier (wijst aan) en toen ging ik weer verder, raad eens wat er gebeurt? Weer in mijn knie gezaagd.	interactie met omgeving		
buitenspeelplaats en je kan er allemaal leuke knutseldingen doen, en je kan brood bakken.	interactie met omgeving		
ik hou heel erg van picknicken	interactie met / gebruik maken van natuur		
ja wel iets om te doen	interactie natuur		
zwemmen !	interactie natuur		
wandelen! I: wandelen, ook leuk om te doen!	interactie natuur		
gewoon leuk om te doen.	gebruik maken van natuur / interactie		
als je even rust wil ga je het liefst naar de natuur? [ja] is het altijd rustig? Kom je daar goed tot rust? P2: meestal wel. Ja, ik kom er wel goed tot rust .	positieve ervaring / interactie met natuur		
heb je genoeg plekken in de natuur voor jezelf? P2: ja, we hebben een hele boomhut gebouwd, dus daar kom ik nu heel vaak.	gebruik maken van natuur		
Ik heb een berg gemaakt omdat ik bergen altijd heel leuk vind, ook om er op te gaan met skiliften .	gebruik maken van natuur		
en zijn er in Nederland ook genoeg plekken waar je lekker kan klimmen? [ja]. P2: ik vind het heel leuk, bij mij heb je zo'n hele hoge boom en daar hebben mensen zeg maar laddertjes op gemaakt tot waar de takken beginnen en daar kan je lekker op klimmen.	gebruik maken van natuur		
het is gewoon leuk om te beklimmen en zo. [leuk om bezig te zijn?] ja.	gebruik maken van natuur		
wandelen, of, bijvoorbeeld zo'n zipline, of als er schommels zijn op de schommel .	gebruik maken van natuur		
: ik kan super slecht tekenen.. [maakt niks uit!] Want ik heb net in mijn vinger gezaagd. [oh, haha]	interactie met omgeving		
wandelen .	gebruik maken van de natuur		
fietsen en lopen, omdat ik dat bijna elke dag doe.	gebruik maken van de natuur		

waren jullie erg hard hutten aan het bouwen, dat je in je vinger hebt gezaagd? P1: ja.	gebruik maken van de natuur		
die kon je ook voeren.	interactie met natuur		
zwemmen.	gebruik maken van natuur		
ik ga een kind tekenen die zwemt. Of een kind die gaat verdrinken. I: ehm ja, maar zwemmen is wel iets leuker, toch? P2: dit zijn de armen, en ik ga even zwembandjes zetten.	interactie met / gebruik maken van natuur		
wat vind jij nog meer leuk om te doen in de natuur? P3: zwemmen. I: ook zwemmen ?	gebruik maken van natuur		
waren twee glijbanen	gebruik maken van natuur		
komen jullie vaak in de natuur? P1-4: ja, soms, nee (wisselende antwoorden door elkaar) P3: ik wel, vooral omdat we een zwembad hebben opstaan.	interactie met / gebruik maken van natuur		
En daar (natuurspeeltuin) spelen we dan heel vaak .	gebruik maken van natuur		
en wat vind je zo leuk aan de natuurspeeltuin? P3: ehm, gewoon het spel dat we spelen. I: wat voor spelletjes spelen jullie dan allemaal? P3: dat we arm beginnen en dan vinden we allemaal goud en diamanten en dan worden we rijk.	interactie met / gebruik maken van natuur / verbeelding		
en jullie hebben ook een soort speelpleintje voor de deur gelijk he? [ja] gaan jullie daar ook wel eens spelen? P1: ehm ja, maar het is een beetje voor iets kleinere kinderen. Dus wat ik dan meestal doe is, op de top klimmen. Of we gaan met andere vriendinnen Marco Polo spelen. *legt uit hoe het spel werkt*	gebruik van locatie		
wat doen jullie dan nog meer allemaal? P1: eehm, tikkertje.. soms voetje van de vloer, maar dat doen we daar bij dat andere speelpleintje daar. En... soms gewoon kletsen als een iemand even naar de wc moet of zo. Ja.. en dat is het eigenlijk.	gebruik van locatie		
ondanks dat het huisje daar niet voor ontworpen lijkt te zijn, gebruikt zij het nog steeds als klimtoestel .	Speeltoestel gebruiken op eigen manier (ipv waar het voor "bedoeld" is)		

mijn zus	wie	Wie: met wie de participanten zeiden gebruik te maken van de natuurlijke omgeving
met mijn gezin.	wie	
het gezin. En heel soms komen mijn opa en oma. En heel heel soms komt mijn neefje	wie	
met kinderen uit de buurt	wie	
de vriendinnen	wie	
zelf	wie	
mijn ouders.	wie	
mijn ouders	wie	
mijn tante	wie	
mijn vriendinnetje	wie	
Want ik heb hier beneden ook een buurman, en wij geven hem soms te eten, en hij is ook doof en al best oud en zijn vrouw is overleden, dus..	Interactie met anderen	Eigen plek toe-eigenen: het belang van een specifieke locatie in het gebruik van de natuurlijke omgeving.
Als het warm is, laten ze weten, is het er vaak helemaal vol. Aan de kant waar we nu zijn komen dan vooral kinderen, aan de andere kant van het water (de kant die aan het park grenst) komen vooral jongeren, volwassenen en mensen met honden	Domein waar alleen de kinderen komen (children's place?)	
Ondanks dat de kinderen in het interview aangaven de steiger zo leuk te vinden omdat het er gezellig is en er veel andere kinderen zijn, hopen ze nu de plek voor zichzelf te hebben.	Tegenstrijdigheid: plek voor jezelf of juist gezellig met anderen?	
De kinderen dagen elkaar ondertussen uit om steeds een stukje verder het water in te gaan, totdat ze uiteindelijk alle twee helemaal door zijn.	Grenzen verleggen	Grenzen verleggen: hoe de participanten de natuurlijke omgeving gebruiken om hun eigen grenzen op te zoeken en te verleggen, het aangaan van uitdagingen
waarbij het meisje haar grenzen met de hond steeds wat verlegt. Uiteindelijk durft ze hem zelfs een paar keer te aaien en rent ze met hem mee wanneer hij weer verder moet met zijn baasje. De meisjes vertellen later dat ze een plan hadden bedacht om er uit te kunnen als de hond er stond: de een zwom de andere kant op, waardoor de hond mee liep en de andere er uit kon, dan riep de ander de hond waardoor het eerste meisje ook uit het water kon klimmen. Zo losten ze samen hun "probleem" op.	Grenzen verleggen	
vinden jullie het (hutten bouwen) niet leuk? P2: jawel. I: beetje gevaarlijk is ook wel leuk, toch? P1: ja maar je hebt spijkers en je kan zo je vingers er af snijden. I: ja, jij hebt al bijna je vinger er af gezaagd.	veiligheid / grenzen verleggen	

Ontmoetingsplekken zoals deze zorgen er zo voor dat kinderen ervaringen opdoen en hun grenzen verleggen.	Grenzen verleggen		
Wat ik wel leuk vind aan de natuur is dat er dieren leven. I: ja gelukkig maar he. Zie je vaak dieren in de natuur? P3: ehm, niet echt vaak wilde dieren. I: maakt je dat uit? P3: nee niet zo, als ik maar dieren zie.	verbeelding	Verbeelding: hoe de participanten de natuur tot hun verbeelding laten spreken, de natuurlijke omgeving oprekken in hun fantasie, de aanwezigheid van de natuurlijke omgeving spreekt tot de verbeelding: doet de participanten dingen inbeelden en rekt daarmee hun (belevings)wereld op	
en wat vind je zo leuk aan de natuurspeeltuin? P3: ehm, gewoon het spel dat we spelen. I: wat voor spelletjes spelen jullie dan allemaal? P3: dat we arm beginnen en dan vinden we allemaal goud en diamanten en dan worden we rijk.	interactie met / gebruik maken van natuur / verbeelding		
Zitten er veel vissen bij de steiger? P1: ik heb er nog nooit een gezien, want ze gaan meteen weg als je er in springt .	Interactie dieren (nog nooit gezien want ze gaan weg: de verbeelding is dus dat ze er wel zijn) : verbeelding		
Het meisje vertelt hierop dat haar moeder het eng vindt omdat ze een keer uit een ander huisje was gevallen en toen haar arm had gebroken. Ondanks dat lijkt ze niet afgeschrikt van het klimmen	veiligheid	Veiligheid: perceptie van veiligheid (ook vanuit ouderlijk perspectief) zowel fysieke veiligheid als gevoel van veiligheid in de buurt	Negatieve aspecten (belemmeringen) Totaal aantal codes: 29
We lopen verder. Om bij de steiger te komen moet er een drukke weg overgestoken worden. De moeder spreekt haar zorgen uit over de logee, die volgens haar eigen ouder niet goed genoeg op let bij het oversteken .	veiligheid		
Alleen vinden mijn ouders het niet zo leuk [want die hebben hoogtevrees e.d.] maar ik vond het ook soms best wel eng want er was gewoon een klif daar naast het trappetje!	veiligheid		
vinden jullie het (hutten bouwen) niet leuk? P2: jawel. I: beetje gevaarlijk is ook wel leuk, toch? P1: ja maar je hebt spijkers en je kan zo je vingers er af snijden. I: ja, jij hebt al bijna je vinger er af gezaagd.	veiligheid / grenzen verleggen		
Ik snap nog steeds niet, dat dit eigenlijk heel gevaarlijk is. I: wat snap je niet? P1: dit is eigenlijk heel erg gevaarlijk. I: wat? Hutten bouwen? P1&2: ja!	veiligheid		

<p>een keertje, ging ik met mijn vriendinnen daar spelen. En, we gingen iets van tikkertje doen, en toen was er een meneer, en die was een beetje raar want die ging een soort van inbreken of zo. Hij was dronken, denk ik. En toen zei een ander meisje zo van "is die meneer wel goed?" [*lacht*] en toen keek die meneer naar ons en die zei toen "je gaat niet de politie bellen!" en dat schreeuwde hij toen een paar keer en toen rende ik keihard weg omdat ik bang was, met een ander meisje. Daarna zijn hun weer terug gegaan, maar ik durfde niet meer.</p>	<p>negatieve ervaring / veiligheid</p>		
<p>en zijn er ook dingen die je niet zo leuk vindt aan het Erasmuspark? P1: [stilte] ja, de modder !</p>	<p>negatief punt</p>	<p>negatieve associatie locatie: zowel de specifieke natuurlijke plekken die genoemd zijn in de interviews als de Baarsjes in het algemeen</p>	
<p>je minder leuk vindt aan de school? P1: leren. *iedereen lacht* P1: en werken. I: dus je gaat er liever alleen heen om te spelen? P1: ja. En huiswerk maken.</p>	<p>negatieve aspecten locatie (associatie)</p>		
<p>dingen die je niet zo leuk vindt in de Baarsjes? Of plekken waar je nooit naartoe wilt gaan? P2: de drukheid. Met auto's. P1: en, plekken waar feestjes zijn gehouden, want dan komen er soms dronken mensen en daar ben ik bang voor. [dat snap ik wel, die maken ook veel lawaai] ja, die schreeuwen echt keihard dan, als ze dronken zijn.</p>	<p>negatief aspect locatie</p>		
<p>I : je vindt het overal in de baarsjes leuk? [ja] behalve als er dronken mensen zijn? P1: *lacht* ja. Of gewoon, mensen die een beetje... P2: gek in hun hoofd zijn? P1: ja</p>	<p>negatief aspect locatie</p>		
<p>onze bovenburen zijn heel boos meestal</p>	<p>negatieve ervaring</p>		
<p>en als je nou iets zou kunnen veranderen in het bos, wat zou je dan anders willen? P2: dat alle vieze beestjes weggaan .</p>	<p>Interactie met natuur / negatief aspect</p>		
<p>I: en zijn er ook dingen die jullie niet zo leuk vinden aan de natuur? P1: dat dieren elkaar opeten.</p>	<p>negatieve ervaring natuur</p>		
<p>Zijn er ook dingen die jullie niet leuk vinden aan de natuur? P2: mensen P1: mensen vind ik ook stom I: wat voor mensen vind je stom? P1: die de natuur kapot maken. En bomen kappen en zo. P2: dieren doden. Nooit dieren doden.</p>	<p>negatief aspect natuur</p>		

I: nee? Zijn jullie vegetarisch? P1&2: nee.			
en zijn er ook dingen die jullie niet leuk vinden aan de natuur? P1: de beestjes.	negatief aspect		
Alleen soms heb je van die jongetjes, of ja, van die jongens, en die gaan dan helemaal herrie [maken]. I: dat vind je dan minder? Je wil het liefst een plek voor jezelf in de natuur? P2: ja.	negatief aspect		
Hij was eerst mooier, maar toen waren er van die rotjongens die dachten dat het leuk was om het kapot te maken, dus nu hebben we alleen nog maar de constructie.	negatief aspect		
een keertje, ging ik met mijn vriendinnen daar spelen. En, we gingen iets van tikkertje doen, en toen was er een meneer, en die was een beetje raar want die ging een soort van inbreken of zo. Hij was dronken, denk ik. En toen zei een ander meisje zo van "is die meneer wel goed?" [*lacht*] en toen keek die meneer naar ons en die zei toen "je gaat niet de politie bellen!" en dat schreeuwde hij toen een paar keer en toen rende ik keihard weg omdat ik bang was, met een ander meisje. Daarna zijn hun weer terug gegaan, maar ik durfde niet meer.	negatieve ervaring / veiligheid	<p>Negatieve ervaringen met andere mensen: wat de participanten negatief associeerden aan andere mensen die ze in de natuurlijke omgeving tegenkwamen</p>	
dingen die je niet zo leuk vindt in de Baarsjes? Of plekken waar je nooit naartoe wilt gaan? P2: de drukheid. Met auto's. P1: en, plekken waar feestjes zijn gehouden, want dan komen er soms dronken mensen en daar ben ik bang voor. [dat snap ik wel, die maken ook veel lawaai] ja, die schreeuwen echt keihard dan, als ze dronken zijn.	negatief aspect locatie		
I : je vindt het overal in de baarsjes leuk? [ja] behalve als er dronken mensen zijn? P1: *lacht* ja. Of gewoon, mensen die een beetje... P2: gek in hun hoofd zijn? P1: ja	negatief aspect locatie		
onze bovenburen zijn heel boos meestal	negatieve ervaring		

en zijn er ook dingen die jullie niet leuk vinden aan de natuur? Allemaal: ja!! I: wat dan? P2: dat mensen steeds roken! I: dus andere mensen, vind jij niet zo leuk? [lacht]	negatief aspect natuur		
tenzij ik blijf zitten.	onzekerheid / prestatiedruk?	Vergelijking met anderen: vergelijking van eigen prestaties op school met die van anderen, doet af aan vrije tijd? Prestatiedruk, intrinsiek en van buitenaf.	
oh ik ben juist, ik ben met alles plus kind [echt? Wat goed!] ja. Dus dan zit je ook op een soort, elke woensdag ga je dan naar mini denk lab, zo heet dat, en dan ga je, allemaal andere leuke dingen doen, waar je soms gefrustreerd van wordt. En dat doe je, omdat je ook iets beter bent dan de andere kinderen. Dan moet je naar een andere klas, en daar ga je dan allemaal andere leuke activiteiten doen.	Vergelijken met andere kinderen / presteren		
er bestaat ook denk lab, voor nog betere kinderen, die nog iets meer, hoe heet dat... P2: nog meer slimmer zijn? I: die al wat verder zijn? P1: ja.. en daar zit mijn vriendin ook op, want zij is echt in alles goed. Zij is een van de beste eigenlijk.	Vergelijken met andere kinderen / presteren		
want ik heb bijna elke dag een sport.	tijdsindeling	Tijdsindeling: hoe de tijd van de participanten ingedeeld wordt, de belemmeringen en regels waar ze daarbij mee te maken krijgen	
vertelt over dat ze maar 2 clubjes mag na school (sport, instrumenten, etc.)	tijdsindeling kinderen		
: of heb je geen tijd? [ja] moet je andere dingen doen? [ja!] wat voor dingen? P1: elke dag na het eten kaarten, dat heet pesten.	tijdsindeling		
ik zit al op drie sporten. Ik ga op tennis, dat is al mijn derde sport. En ik zit nog op dansen en hockey. Hockey vind ik het aller leukst.	tijdsindeling		
schommelen. Of met de dieren. (P1: ja met de dieren!) [uit de intonatie lijkt of ze dit eigenlijk toch leuker vinden dan schommelen].	interactie natuur / gebruik omgeving	Favoriete bezigheid dieren: Wat de participanten noemden als leukste aan de natuur samenhangend met dieren	Positieve aspecten. Totaal aantal codes: 39
dan ga ik konijntjes aaien en zo. En naar de varkens kijken en naar de cavia's. en de varkens gaan soms heel erg druk doen, maar dat vind ik juist grappig.	interactie met natuur		
dennenappels naar mijn zus gooien .	Activiteit/interactie met natuur	Favoriete bezigheid omgeving: wat de participanten noemden als leukste aan de natuur om te doen in de natuurlijke omgeving	
en soms zwemmen .	Activiteit/interactie met natuur		
zwemmen .	activiteit / interactie met natuur		

klimmen. Het gaat tot en met 10. Parcours 10. En ik ben tot 3 gegaan. Mijn vriendinnen komen tot 4.	interactie met locatie		
rijden met de fietsen.	interactie met natuur		
takken zoeken.	interactie met natuur		
een picknick !	interactie met / gebruik maken van natuur		
buitenspeelplaats en je kan er allemaal leuke knutseldingen doen, en je kan brood bakken.	interactie met omgeving		
ik hou heel erg van picknicken	interactie met / gebruik maken van natuur		
ja wel iets om te doen	interactie natuur		
zwemmen !	interactie natuur		
wandelen! I: wandelen, ook leuk om te doen!	interactie natuur		
Ik heb een berg gemaakt omdat ik bergen altijd heel leuk vind, ook om er op te gaan met skiliften .	gebruik maken van natuur		
en zijn er in Nederland ook genoeg plekken waar je lekker kan klimmen? [ja]. P2: ik vind het heel leuk, bij mij heb je zo'n hele hoge boom en daar hebben mensen zeg maar laddertjes op gemaakt tot waar de takken beginnen en daar kan je lekker op klimmen.	gebruik maken van natuur		
het is gewoon leuk om te beklimmen en zo. [leuk om bezig te zijn?] ja.	gebruik maken van natuur		
wandelen, of, bijvoorbeeld zo'n zipline, of als er schommels zijn op de schommel .	gebruik maken van natuur		
En daar (natuurspeeltuin) spelen we dan heel vaak .	gebruik maken van natuur		
en wat vind je zo leuk aan de natuurspeeltuin? P3: ehm, gewoon het spel dat we spelen. I: wat voor spelletjes spelen jullie dan allemaal? P3: dat we arm beginnen en dan vinden we allemaal goud en diamanten en dan worden we rijk.	interactie met / gebruik maken van natuur / verbeelding		
de speeltuin leuk, en er komen wel vaak veel mensen die ik ken .	Positieve aspecten locatie	Interactie andere kinderen: sociale kenmerken van de natuurlijke omgeving als positief punt	
gewoon heel gezellig en leuk .	Positieve aspecten locatie		
omdat daar ook heel veel kinderen komen die ik ken, dus dan vindt ik het ook heel gezellig .	positief punt / interactie andere kinderen		

wat vind je zo leuk aan je school? P1: ehm. Het is leuk, en gezellig, en, ehm, ja, zijn lieve juffen en meesters, en ik ken ze al lang. En een juf die kent mijn twee vriendinnen al heel lang en mij ook, dus dan, als er wat is dan weet ze het gewoon.	positieve punten locatie / interactie, bekend terrein		
wat vinden jullie nou leuk aan in de Baarsjes wonen? P1: gezellig. Je kent heel veel mensen.	Positief punt locatie (de Baarsjes)		
In mijn eentje vind ik het niet zo gezellig, want, ja, ik weet eigenlijk niet zo goed waarom .	interactie met anderen belangrijk punt?		
ga je vaak met kinderen uit de buurt op straat spelen? P1: best vaak ja. I: ja? Vind je dat leuk? P1: ja.	interactie andere kinderen		
de hallen, of, het ketelhuis. En, ehm. Ik vind het ook leuk dat het een groot park is, en dat er op het grasveld ook nog een klein zwembadje is. Nou, hij is best groot, best lang. En, ja dat vind ik leuk aan het westerpark.	positieve aspecten locatie	Positief aspect speciekieke locatie	
Dieren. En nog een dier. En regen. Alles. Alles wat leuk is aan de natuur.	positief aspect natuur		
hou jij heel erg van natuur? I: ja ik hou wel van natuur! Jij? P1: ja..	affectie met natuur		
gaan jullie vaak naar de natuur? P1: ja, ik hou er wel heel veel van.	natuur / positieve ervaring		
omdat ik heel veel buiten ben, en het is ook gewoon mijn lievelingsplek. [P2: en om tot rust te komen(?)]	positieve ervaring natuur		
als je even rust wil ga je het liefst naar de natuur? [ja] is het altijd rustig? Kom je daar goed tot rust? P2: meestal wel. Ja, ik kom er wel goed tot rust .	positieve ervaring / interactie met natuur	Affectie natuur: positieve ervaringen met de natuurlijke omgeving	
en jij, wat vind jij nou het leukst aan de natuur? P2: dat er dieren zijn.	positief aspect natuur		
op de grond mag zitten, zonder stoel, dat je een keer gewoon kan voelen hoe het is om gewoon te zitten in de natuur, hoe het voelt om dat te doen . I: oh ja! En, hoe voelt dat dan? P2: het voelt heel bevrijdend.	lichamelijke ervaring / interactie met natuur / positieve ervaring		
Mogen jullie gewoon zelf naar huis en naar buiten? P1: ja, we zijn hier ook zelf naar toe.	vrijheid / beperkingen	Vrijheid: de vrijheid die de participanten krijgen in hun gebruik van de natuurlijke omgeving	
Mogen jullie dan overal heen waar je wil? P1&2: nee, niet overal. Maar, papa zei dat we ook naar Bax (?) mochten, maar dat hebben we niet gedaan.	vrijheid / beperkingen		
een bioscoop	verbeterpunt		

	gebrek omgeving / verbeter punt	Verbeterpunten: Wat er volgens de participanten beter kan in de buurt	
en zijn er ook genoeg dieren hier in de buurt, vinden jullie? P1: nee.			
[komt een vriendje langs om te klagen dat hij al zo lang bezig is met hun hut te bouwen, en dat ze al een uur bezig zijn met tekenen.]	afleiding omgeving	sociale afleidingen: participanten waren afgeleid door hun sociale verplichtingen naar anderen	Afleiding Totaal aantal codes: 10
en terwijl de jongens lekker aan het timmeren zijn, zijn wij lekker aan het tekenen.	afleiding omgeving		
oh nee, er gaan kinderen in onze hut! I: moeten jullie ze even weggagen? P3: ja...	afleiding omgeving		
[discussie over de hut die ze aan het bouwen zijn en hoe ze die gaan noemen.]	afleiding omgeving		
Oehhh, ze (de konijnen) komen naar buiten .	afleiding omgeving	Dierlijke afleidingen: participanten waren afgeleid door iets wat de dieren in de nabije omgeving deden of door iets wat ze met de dieren wouden doen	
kinderen zijn afgeleid door de konijnen]	afleiding omgeving		
[P1&2 gaan even weg om de konijnen te aaien]	afleiding omgeving		
Ik ga even bij de cavia's kijken. Tot zo.	afleiding omgeving		
[P1&2 zijn weer afgeleid door de konijnen]	afleiding omgeving		
kijk het konijn daar! Hij doet vaak zijn oortje omhoog!	afleiding omgeving / lichamelijke ervaring / zien		
			Totaal aantal codes: 207